fueloil & oil heat

JANUARY 1960

★★★ EDITION

38 Years devoted to Progress in Oilheating and Airconditioning

Oilheating ✱ Sales up 12%

Installations in 1959 reached Total of 637,057

Dealers ✱ liked 1959

Sales and Profits up due to more Selling

Selling by ✱ comparing Costs

Operating cost Study sells commercial Jobs

Teen-age ✱ Training for Oilheating

BETTER HEAT WITH OIL HEAT
AND WITH OIL HEAT · YOU ALWAYS GET A 'LITTLE BILL'!
MEMBER · OIL HEAT COUNCIL
YOUNG SUPPLY CO.
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CONTENTS CONVENIENT COMFORT
OIL HEATS BEST
LITTLE BILL · AND WITH OIL HEAT · YOU ALWAYS GET A 'LITTLE BILL'!
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2. **Free Opening Outlet Valve**

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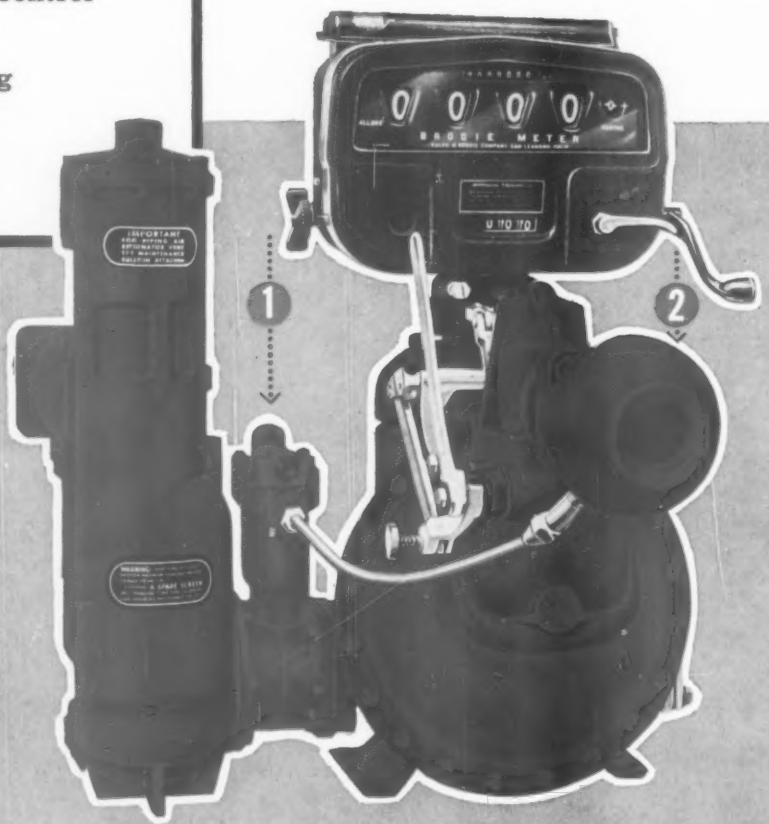

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2 **Brodie Differential Check Valve closes tight when air enters system. It has far less restriction than a spring loaded back pressure check valve.**

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BiRotor METERS

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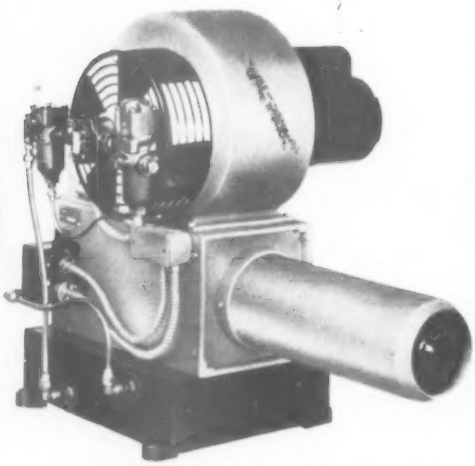

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3 SIZES—
3 to 25 G.P.H.

In factories, warehouses and apartment buildings—in schools, churches, hospitals and institutions throughout the United States, the SUN-RAY #4-#5 OIL BURNER is providing real, honest-to-goodness heating economy.

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139-22 QUEENS BOULEVARD • JAMAICA 35, N. Y.

JANUARY fueloil & oilheat 1960

VOLUME 19 NUMBER 1

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

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Among other things . . .

This being our Annual Statistical Review the first two features concern sales activities during 1959. The first article contains our preliminary estimates for oilheating installations during 1959. Next is a survey of oilheating dealer operations. As in the past, we are indebted and indeed grateful to a group of our dealer readers who provided the information upon which these studies are based.

There is an interesting sales approach contained in the article by Frank Wymbs, Jr. "Selling by cost Comparisons" reviews the success that the Wymbs organization has enjoyed in the New York market selling No. 5 oilburners on the basis of performance and savings.

On pages 74 and 75 are some "action" shots of teen-age vocational high school students learning oilheating. These are new shops in brand new vocational schools.

Cover Photo: Travelling billboards for oilheating in Philadelphia. See page 116.

SPEAKING before the Warm Air convention in St. Louis early in December, George Cline Smith, vice-president of F. W. Dodge Corp., predicted less residential but much more commercial building in 1960 than in 1959. He thinks housing starts, both public and private, will be 1¼ million compared with 1,380,000 in 1959, a drop of 10% in number but 8% in dollars. (For heating installations, of course, the starts often spill over into the next year so we may get just as many new home jobs). Non-residential building volume will be up 7%, his economists foresee.

The slowdown in home starts will not be due to lack of a market but rather to tight money for financing on terms as liberal as in the past. As to general prosperity of the Nation's economy, he noted that practically all economists expect more inflation and rising wages, with new peaks in industrial production and gross national product.

On the trip the editor was briefly in Kansas City, stopped to look over a new home development that seemed to offer fine values. A three-bedroom two-bath home on a really large plot, seven rooms all told (gas heat, Ughhh) but cheap at eighteen thousand. The builder was there and said "Of course it would have to be 'conventional' financing." Asked what that meant, he said not more than 60% first mortgage, at least 10% down and some reasonable 'bonus' on the second mortgage. Probably the tight money policy, fathered by the Federal Reserve system, is wise as a brake on inflation; it will retard new home building for the moment.

A FEW MANUFACTURERS, one or two quite important ones, are taking a dim view of the publicity being given to the new concepts of oil-burning that have been so prevalent in the past year. They wonder if we're not misleading the dealers to expect the impossible, misleading the public in a way that might kick back if we don't finally bring these products to the market.

Of course, the publicity being spread by the National Fueloil Council is beamed almost entirely to consumers, not to dealers. Some of it may be simply 'hopeful' but none of it is unethical. The point that they are attacking is the almost universal public opinion that oil heat is old-fashioned. In several consumer interview polls, both by NFC and by Esso Standard, it is amazing to see how few persons will vote for oil as the heating fuel of the future. They may now be burning oil and very happy with it, but they don't expect to be burning it five years from now.

As to the effect of new idea publicity on dealers, we have the same problem there in a limited degree. A lot of dealers, far too many, think that oil is a cog in the wheel of heating progress and we're moving on. That might be true if everyone thought so, but we've got to prove otherwise, and in many markets we're doing it.

The editor doesn't believe that we will ever see a complete oilheating installation as cheap as a gas job to the builder, but as Gordon McMehen of Toronto points out, we probably will have a heating unit as cheap. We won't overcome the tank and piping cost in comparison with a gas job, but some day before too long a way will be found to subsidize the tank or consumer storage cost. The gas utility typically invests $300 a house in piping and meter. It has the advantage of a captive customer. Also the $300 is capitalized and earns 6% in the rate structure. So it's paid for in the cost of the fuel.

O.K., bright minds of oilheating, how do we do it in oil storage? Send us some suggestions, not too long to print.

Meanwhile, we'll go on describing the new oilburning processes. Everyone that we've covered so far is workable. That doesn't mean it will ever get on the market. Certainly one or more will. Each one described up to now has two things we badly need . . . lower flame temperatures and much lower capacities. Gas and electric heating can handle the 30-40,000 Btu house. We can't do it as well. And with a high flame temperature we now need a sturdier furnace than they do . . . they really make 'em thin.

The question remains as to whether one or more strong manufacturers will take on these new firing methods, tool up some units, sweat out the battle of Underwriters approval, convince the dealers that their servicemen can handle them easily, then be prepared to sell a million. It will really be a case of "Ad Astra per Aspera" . . . to the stars through difficulties. As O. U. Mutz of Indianapolis said at the Warm Air convention, "As we accept challenges we move forward; as we bypass them we move backward."

CHANGE IS THE KEYNOTE of the Sixties, in the opinion of Dr. Pierre A. Rinfret, prominent New York economist who was speaking to an electrical group in Atlantic City. He sees growth rates changing; the money makers of the future are not necessarily those of the past. The present top ten growth industries, he feels, are electric utilities, consumer boats, foreign travel, missiles, electronics, office equipment, housing, aluminum, plastics and drugs. Our fueloil and oilheating business was unhappily not mentioned but we can get some benefit from the housing. Those with waterside bulk plants can put in a marina or plain boat yard, and if margins stay as good, we can do some foreign travel, satisfying our misgivings with the knowledge that since it's a growth industry, everyone must be doing it.

AND TO OUR whole gang, a mighty happy and fruitful New Year, plus an extra year (that's two) to those who helped so much by sending us their figures.

Bob Gray

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The **SCULLY MOBILE HYDRAULIC LABORATORY**, fully equipped to demonstrate under actual field conditions *all phases* of modern, high speed delivery is available at any time to prove to you that the **SCULLY UNIFIL® SYSTEM** is cleaner, faster, more dependable and more profitable than any other tight connection or fast fill system used in fuel oil delivery.

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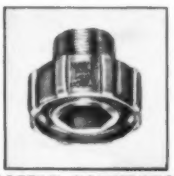

NOZZLE CONNECTOR

ALL-WEATHER CAP

TYPICAL ADAPTOR

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by James M. Collins

WASHINGTON—The new oil imports program for the January-June period is designed to hold down crude oil imports—but the new level for residual imports (425,000 barrels daily) is designed to make sure that no one goes short of this product.

At first Interior Department decided, tentatively, to up the residual allowable by 100,000 barrels daily (from 365,000 for the July-December period)—but got cold feet after coal-state senators and the coal industry raised a storm of protest. Final result was a 60,000 barrels daily increase. In making this decision, Interior Secretary Seaton pointed out that residual stocks are adequate, prices have not risen, and—in any case, importers can always accelerate their imports during the early months of the allocation period to make sure that they meet requirements. Also, the situation will be kept under "constant surveillance."

For domestic crude producers, the new level of crude-unfinished imports during the January-June period is expected to mean a substantial increase in production. It is figured now that domestic production may average about 7,400,000 barrels daily during the next six months, compared with 6,900,000 in the current half-year, and 7,100,000 in December, alone.

But, despite this expected increase, the IPAA is protesting the higher quotas for residual—as are coal men, bitterly. Russell Brown, IPAA counsel, says that the residual increase will not have any "appreciable" effect on oil production—but it could maintain depressed prices on the product.

Most interesting, however, is Brown's frank acknowledgement, now, that perhaps "other factors" than oil imports may be causes for the continued depressed conditions in the domestic industry. He did not name them—but he said that it is the responsibility of the whole industry to clear up the situation. What he may have had in mind are too-high refinery runs and too-low prices for natural gas at the well. Brown said that there should be "a forum" where the unnamed conditions he mentioned could be studied.

Coal Men Protest, Ask Cuts

Most bitter, however, about the raise in residual import quotas is the National Coal Policy Conference—made up of coal companies, coal-carrying railroads, the United Mine Workers and some utilities. The NCPC says it will do "everything in our power" to reverse Seaton's decision, and to have residual imports reduced. The conference claims stocks are adequate, prices for residual are at the lowest in 11 years, and everything points to need for a reduction, not an increase in residual imports.

Fuels Policy Drive On

Actually, the coal conference may be secretly pleased at the substantial hike made in residual imports. It will lend more persuasiveness to their pleadings for a "fuels policy study" by Congress, when the new session starts.

Everything done by this group of coal interests is aimed at a probe of the entire fuels picture by a joint committee of the House and Senate—and imposition of restraints on fuels with which coal competes.

Gas 'Dumping' is Real Target

The coal industry is mainly interested in "dump" sales of natural gas by large interstate pipelines to industrial users in off-peak seasons, at prices with which coal can not compete. Oil men protest that no new "policy" is needed; rather fuels preference should be set by competition. Watch for a drive by coal interests to get clearance for a joint resolution, setting up such an investigation, however, which is now before the House Rules Committee. (A similar resolution has already gone to the Senate floor, with the blessings of the Interior Committee, and probably will be approved. But, it will be meaningless unless the House also approves the idea.) Odds are that this resolution will get an OK, in the House. The resultant probe on fuels probably will be long and thorough.

Military Gets Interested in Gas

Meanwhile, some military officials now are worried about the competition between natural gas and oil products—in the market-place—and at the relatively cheap prices for which gas is sold at the well. Their concern stems from this reasoning: In an emergency, the military and large sectors of the essential civilian economy must rely on middle-distillates (jet fuel and diesel fuels, particularly), and in huge quantities. But, if natural gas gets a throttle-hold on the fuels market, then distillates will be produced in relatively smaller quantities at the refinery, with the main emphasis on gasoline—for which there is no substitute. Such a situation might result, down the road, in inability of refiners to come up with the quantities of middle distillates needed in emergency. Pointing up this problem is the trend by the military to go deeper into the crude barrel for jet fuel. Now, most jet fuel has a gasoline boiling range, for military planes (civilian jets use kerosene fuel). But, the military already is talking about heavier jet fuel, in the JP-6 and JP-7 range.

What makes this situation significant is that it would not be surprising to find the military backing legislation—along with other Administration officials—for legislation to lift public-utility control of gas producers, so that prices could rise—in competition with oil products.

Marketing Divorcement Discussed

Meanwhile, Congressman Roosevelt (D., California) at the wind-up of three days of hearings in December—on "coercion" of gasoline dealers by oil suppliers to sell only sponsored TBA items—said he believed legislation to divorce oil suppliers from marketing would not be practical because too few congressmen are familiar with the situation to back such legislation. But, Roosevelt may hold more hearings in January, calling in major oil executives, in hopes of building support for divorcement.

It's January 1960. And it might as well be June 1959—when WHITE-HEAT was first introduced. For WHITE-HEAT is still WHITE-HEAT. Still Platinumized and uncracked and straight-run. Still as pure and clean and clear as ever. Still the finest #2 home heating oil in the industry. But some things have changed. Demand for WHITE-HEAT has increased. And so has the number of dealers carrying it. To meet this growing demand, the modern Hess refinery at Port Reading has doubled its capacity while still maintaining all of the rigid and exacting controls that first perfected WHITE-HEAT. For every shipment of Platinumized WHITE-HEAT goes through a unique quality-control program at the Hess refinery. A complete program of thorough testing that goes on every hour of every day of every week, throughout the year. No matter what the month or weather or market condition, the quality-controls never vary. That's why the quality of WHITE-HEAT never varies either. But quality in itself is not enough in the home heating oil business. Equally important, and hand-in-hand with it, goes supply. Steady, assured supply that can be counted on whatever the emergency. Hess terminals, with their one billion gallon storage facilities, assure dealers that security of supply. In fact, in the New York-New Jersey area alone, Hess maintains 250,000,000 gallons of oil—always. Further, WHITE-HEAT delivery is always on-schedule-delivery. Each of the 150 trailer-trucks in the Hess-owned fleet stands ready to move—at a moment's notice. Ready to deliver WHITE-HEAT anywhere, anytime, in any quantity. We are proud of Platinumized WHITE-HEAT. Proud of its quality; proud of our ability to keep it in ready supply—to deliver it—whenever, wherever you need it.

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[illegible] BTU per hr. input.

HTL OIL FIRED

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NMS GAS FIRED

70,000 to 140,000 BTU per hr. input.

COUNTERFLOW MODELS

WTS GAS FIRED

80,000 to 125,000 BTU per hr. input.

WTL OIL FIRED

.65 gal. to 1.0 gal. per hr. firing rate.

BASEMENT MODELS

BTS GAS FIRED

100,000 to 200,000 BTU per hr. input.

BTL OIL FIRED

.72 gal. to 1.50 gal. per hr. firing rate.

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Add-on Units from 2 to 10 ton capacity.

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Oilheating & Airconditioning
MERCHANDISING NEWS

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Monthly Oilheating Trends

NOVEMBER INSTALLATIONS of domestic oilheating equipment are estimated at 62,031 showing a 21% rise over last year's 51,264. This pretty much reflects the growing influence of new homes and replacements rather than conversions as factors in a changing seasonal pattern.

For the eleven months through November, the estimate is 587,533 installations or 12% above last year's 523,740.

The installations by types in November were new homes, 24,374; replacements of old oilheating 14,960; and conversions from other fuels, 22,697.

For the total eleven months new homes are estimated at 188,596 as against 172,369 in the same period of 1958; replacements 193,301 compared with 156,265 and conversions from other fuels 205,636 against last year's 195,106.

Oilheating dealers in November installed 620 central airconditioning jobs; they also sold during the month 3,313 water heaters with mechanical burners.

Based on 11 months estimated installations and nine months factory shipments we are making a preliminary estimate for the full year of 666,317 factory shipments of separate oilburners and oilfired units which is 16.4% above 1959. The preliminary estimate on installations for the full year is 637,057 or 12.1% higher than the previous year.

Since this is the first year in three to show a gain it is an occasion for considerable good feeling.

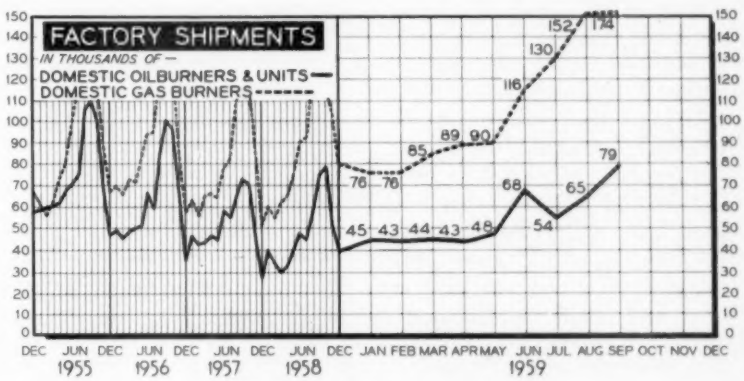
Oilheating Stocks: On November 30, dealers were holding approximately 62,196 domestic oilburners and units compared with 65,210 the previous month and with 72,418 a year earlier.

The November 30 stocks were divided: separate burners, 29,232; boiler-burner units, 14,305; and furnace-burner units, 18,659.

Factory stocks at the end of September were 43,949 compared with 36,223 on the same date last year.

The improvement in sales has been causing manufacturers to build larger inventories in spite of the steel situation.

Tank Stocks: At the end of November stocks of consumer tanks in dealer hands were approximately 30,167, compared with 38,759 a month earlier and with 26,750 a year earlier.


FACTORY SHIPMENTS
IN THOUSANDS OF—
DOMESTIC OILBURNERS & UNITS—
DOMESTIC GAS BURNERS------
DEC JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1955 1956 1957 1958 1959

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	SEPTEMBER			NINE MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	53,484	47,375	+12.9	344,026	261,004	+31.2
Boiler Burners	6,196	7,559	—18.0	35,047	32,461	+ 8.0
Furnace Burners	12,267	19,878	—38.3	112,003	108,891	+ 2.9
All Domestic	78,947	74,812	+ 5.5	491,076	402,356	+22.1
Commercial	4,502	3,724	+20.9	30,953	25,800	+20.0
Total	83,449	78,536	+ 6.3	522,029	428,156	+21.9

*The 1959 figures are not directly comparable to 1958 since the Census Bureau changed its base from which total shipments are estimated by them.

November Minimum Retail Prices Key Dealers

	Nov. Avg.	Oct. Avg.
Separate Burners	$314	$313
Boiler Burners	744	742
Furnace Burners	622	621

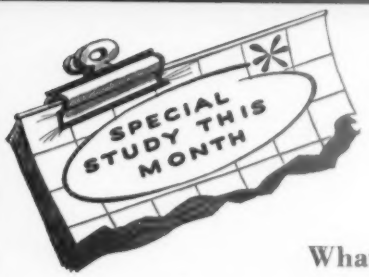
Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

November	94.5	Six months ago	94.6
October	94.6	Year ago	96.5

RETAIL

November	91.9	Six months ago	92.1
October	92.1	Year ago	92.4



What is the turnover Rate for domestic fueloil Accounts?

THERE ARE ALMOST as many ideas on what is a reasonable turnover rate on fueloil accounts as there are major markets in the oilheating industry. Industry practices within an area have a lot of bearing on how long a customer stays put.

In our study this month, we tried to make the questions extra clear so there could be no misunderstanding. Some companies consider turnover to include folks that move even though they keep the account at the new location. Other companies don't include these accounts in their gains or losses.

This time to clear up that point, we asked that they only consider customer names completely dropped from the books and new customers to include only those where a new name was added to the list. On that basis, and considering the country as a whole, we find that during the past 12 months the companies lost 5.8% of the accounts that had been on the books at any time during the year.

During the same period of time, they added 7.6% in completely new names. These percentages are calculated from the actual numbers that they gave us of gains and losses as against their total customers on the books at the present time.

The geographic variations were a little surprising. For example, in New England the losses were 6.1% and the gains 10.6%. In the Mid-Atlantic states 5.0% were lost while 6.6% were added; in the Midwest the customer name drop represented 5.8% and the new customers came to 6.3%. The Pacific Northwest showed the most rapid turnover with 9.6% of customers lost and 11.5% gained.

Any way you look at it, the fueloil account is a pretty valuable piece of property because even in the fast-turnover area the customers last quite a long time.

The important phases of a study like this are to encourage the individual company to analyse its own losses and find out what happened. Taking the country as a whole, by far the largest single reason for losing customers was families moving out of the area. This accounted for 45% of all names dropped from the books.

The next most important reason was credit, where names were taken off when further delivery was refused as being too risky on collection. This accounted for 17% of the drops.

In third place as a cause of lost accounts was conversions to gas, representing 12% of the losses. Notice that this does not say that the dealers lost 12% of their accounts to gas. But rather it is 12% of the accounts they did lose, which was only 0.7% of the customers on the books for the reporting group.

The fourth category in losses was when the account went to a friend or to another oil company for reasons of business obligation, which accounted for 9% of all losses.

Tied for fifth place each with 5% of the losses were three reasons . . . dissatisfied with service, change for a lower price, or anyone of several miscellaneous reasons. A typical example of these would be where one company bought out another and wasn't able to hold all of the customers.

Again in this miscellaneous lot, we find a replacement sale made by another company, who switched the oil account. Free service also caused some of these losses, as did demolitions and of course, some customer deaths.

So much for the miscellaneous reasons; we now come back to two specific reasons with each rated at 1% of total losses to finish up the 100%. These final reasons were: the customer believed another oil was better; switched for trading stamps.

The table shows how these various loss categories are applied to the principal oilheating areas.

We next asked the group if they believe the rate of turnover is greater than some time ago—for example three years ago. Just half of the companies, weighted by number of customers and geography, say that there

The Reasons Accounts were Lost

(as percent of total losses)

	Moved	*Credit*	*Went to Friend*	*Unhappy with Service*	*Believed another oil*	*Converted to Gas*	*Converted to Elec.*	*Lower Price*	*Stamps*	*Other*
New Eng.	48%	18%	12%	3%	..	3%	..	12%	1%	3%
Mid-Atl.	44	15	10	8	1%	8	..	5	..	9
Midwest	45	23	4	1	1	26	..	..	..	..
Pac. N. W.	45	3	8	2	..	1	3%	3	9	24
Weighted U. S.	45%	17%	9%	5%	1%	12%	..	5%	1%	5%

Experience of a typical New Englander

One of the reporting fueloil distributors in a New England city of 100,000 was especially helpful in sending us records on new accounts and losses for the past nine years. To avoid disclosure we've changed his figures to percentages and they tell an interesting story of trends.

	PER THOUSAND ACCOUNTS		REASONS FOR LOSSES							
Year	*Additions*	*Losses*	*Price*	*Service and Quality*	*Moved*	*Didn't sell new oil Unit*	*Credit*	*Gas*	*Went to Friend*	*Misc.*
1951	188	103	2%	7%	35%	5%	7%	..	19%	25%
1952	159	45	15	..	45	..	3	3%	34	..
1953	106	121	13	7	47	5	7	..	17	4
1954	130	96	10	12	43	2	6	5	16	6
1955	102	56	6	9	57	..	8	3	13	4
1956	101	81	11	7	50	1	7	1	16	7
1957	140	80	10	5	54	2	12	1	13	3
1958	80	75	10	3	51	1	11	3	15	6
1959	82	114	12	6	50	1	9	6	14	2
Nine year Average	118	86	10%	7%	48%	2%	8%	2%	17%	6%

has been no change in three years. Another 41% say that the turnover rate is greater, while 9% say that it is less.

The Midwest and Pacific Northwest have the strongest impression that the turnover rate is increasing, with approximately 80% in each section voting that it is higher. Lowest on this point is the Mid-Atlantic area with only 14% of the companies voting that the turnover rate is getting worse.

Among those companies that find the turnover rate increasing from three years ago the principal reasons they give are—population shift, more people moving, tougher gas competition, and new companies starting up in the market.

As the final question in the study, we asked what is the average length of time that present customers have been on the books of the fueloil distributors.

For New England, it is 10.4 years; the Mid-Atlantic marketers average 9.8 years; in the Midwest it is 8.9; and on the West Coast 5.3 years. The national average is 9.3 years.

Of course, you cannot relate this average age per account to the turnover rates as given in the earlier part of the study because the total number of fueloil users in the nation gets bigger every year. However, there is a mild correlation in that the Northwest with the highest turnover rate also shows the shortest customer life.

Typical Comments

"To gain business we need more sales solicitation on equipment and oil." . . . "Most of our accounts have been with us from 15 to 20 years; however, the newer ones change more often reducing our average." . . .

"We do not believe account turnover is a problem at this time." . . . "It is a constant selling job to keep accounts; good service is now a must. When a customer is moving he must be contacted immediately because of the inducements offered to new residents in this locale." . . .

"Turnover is natural in this fiercely competitive oil business." . . . "Each year we have been increasing our customers because of our 'free' summer oilburner check-up, 24-hour service, and 'keep fill' service that many of our local companies do not have." . . .

"Moving from one address to another or out of town is our biggest problem; we keep two men busy trying to follow and hold these accounts. They also contact the new tenant and so far with success." . . .

"There are just too many companies in this market now causing confusion bidding for business." . . . "We believe that in the future, accounts will turn over with greater rapidity because the younger generation is switching for reciprocity and credit reasons." . . .

"Very small turnover due to better service and watching accounts more closely. The biggest problem is demolition of older homes that are replaced with large buildings using No. 6 fueloil." . . . "Good service means longevity of oil accounts." . . .

Oilburner Permits*

NOVEMBER 1959		11 MONTHS 1958	1959
2	Albany, N. Y.	26	19
25	Baltimore, Md.	373	294
71	Bridgeport, Conn.	725	636
4	Columbus, O.	31	65
37	Detroit, Mich.	302	309
44	Elizabeth, N. J.	367	425
14	Freeport, N. Y.	163	134
49	Hartford, Conn.	509	585
5	Irvington, N. J.	161	197
59	Meriden, Conn.	469	439
22	Milwaukee, Wis.	414	271
..	Minneapolis, Minn.	170	..
10	Montclair, N. J.	131	103
5	Morristown, N. J.	..	35
24	Mt. Vernon, N. Y.	311	365
..	Newark, N. J.	775	..
66	New Bedford, Mass.	539	567
..	New Haven, Conn.	301	..
15	New Rochelle, N. Y.	141	155
..	Bklyn-Queens	4,759	..
84	Norfolk, Va.	307	292
..	Omaha, Neb.	55	..
1	Orange, N. J.	106	51
6	Passaic, N. J.	76	58
14	Paterson, N. J.	215	219
162	Philadelphia, Pa.**	1,319	1,176
79	Portland, Me.	466	540
82	Portland, Ore.	1,558	1,053
12	Poughkeepsie, N. Y.	82	109
55	Providence, R. I.	400	365
51	Richmond, Va.	353	351
34	Roanoke, Va.	989	709
72	Rochester, N. Y.	553	502
6	Rockville Centre, N. Y.	45	49
..	Salem, Mass.	286	..
104	St. Louis, Mo.	1,101	605
15	St. Paul, Minn.	59	80
3	Schenectady, N. Y.	46	60
25	Spokane, Wash.	248	..
76	Springfield, Mass.	787	749
10	Stamford, Conn.	113	151
53	Washington, D. C.	440	339
26	White Plains, N. Y.	155	154
17	Wilmington, Del.	177	128
96	Worcester, Mass.	800	779
2	Yonker, N. Y.	196	124
	Matched Totals	15,005	13,207
	Percent Change		—12.7

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

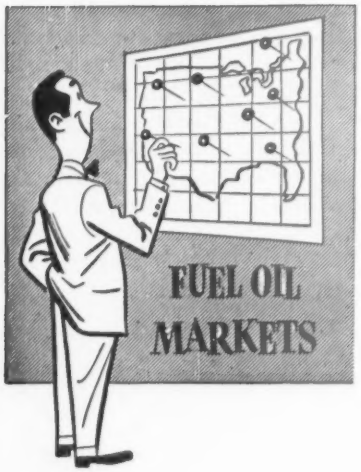
**Courtesy of "Philadelphia Inquirer."

Where is the

New home Market?

	No. of Permits Issued Sept.	9 Mos.
Alabama	1,755	15,401
Arizona	1,929	18,444
Arkansas	302	2,615
California	17,294	182,030
Colorado	1,142	11,674
Connecticut	1,442	13,329
Delaware	86	1,678
District of Columbia	40	614
Florida	7,290	63,200
Georgia	2,014	16,977
Idaho	179	1,546
Illinois	4,959	44,245
Indiana	1,488	13,240
Iowa	731	6,398
Kansas	735	7,640
Kentucky	1,098	7,297
Louisiana	985	12,542
Maine	169	913
Maryland	1,890	21,880
Massachusetts	2,018	15,999
Michigan	3,693	30,522
Minnesota	1,719	14,101
Mississippi	191	2,489
Missouri	2,165	24,825
Montana	152	1,427
Nebraska	552	5,485
Nevada	348	2,740
New Hampshire	175	1,257
New Jersey	3,506	28,769
New Mexico	678	6,722
New York	8,824	76,871
North Carolina	1,086	10,463
North Dakota	649	2,193
Ohio	5,161	42,713
Oklahoma	887	8,158
Oregon	826	6,707
Pennsylvania	3,104	29,884
Rhode Island	359	2,166
South Carolina	207	3,335
South Dakota	208	1,550
Tennessee	1,209	12,672
Texas	6,464	60,468
Utah	759	6,306
Vermont	42	197
Virginia	2,802	22,826
Washington	1,924	18,366
West Virginia	283	2,877
Wisconsin	1,849	14,949
Wyoming	102	1,017

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of the Census, U. S. Dept. of Commerce, Washington 25, D. C.



THE SEASON to November 30 is doing a lot better than last year in the number of degree days, but the East Coast is not much help. The weighted average of all reporting cities shows the East Coast only 0.3% colder than last and 0.4% colder than normal.

On the other hand the Midwest to November 30 was 38.3% colder than last year and 19.5% colder than normal. Thus, the whole area East of the Rockies was 11.7% colder than last year and 6.1% colder than normal.

In the price table there were a lot of changes all of them upward except a .1¢ drop in the tank wagon at Albany. Thirteen of the Eastern markets gave up their .5¢ voluntary allowance which is normally considered a summer discount, the industry having reached a point in early December which was hard to call summer.

The Midwest saw a lot of changes, all upward as demand stiffened with the severe cold. Chicago, Cleveland, St. Louis, Milwaukee and Des Moines were each up .5¢ on tank car with Detroit up .25 and Minneapolis up .75 at that level.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Dec. 11 1959	*Dec. 12 1958*
East Coast	68,407	58,247
Midwest	44,226	49,399
Gulf Coast	31,478	25,388
Total	144,111	132,034

*American Petroleum Institute.

No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of December 10, 1959

	Tank Car	*Tank Wagon†*
Portland, Me.	10.0	14.6
Boston	9.9	14.4
Providence	9.9	14.2
Hartford	10.15	14.2
New Haven	9.8	14.3
Syracuse	11.1	14.6
Albany	10.0	13.9
New York	9.8	13.7
Newark	9.8	13.8
Philadelphia	9.8	14.0
Baltimore	9.8	14.1
Wilmington, N. C.	10.1	13.7
Washington	10.1	14.4
Richmond	10.2	13.8
Charleston, S. C.	10.1	13.43
Chicago	10.125*	14.6
Detroit	10.5	15.1
Cleveland	11.6*	15.6
Minneapolis	10.929	14.7
St. Louis	10.5*	15.4
Indianapolis	10.39*	15.4
Milwaukee	10.725*	15.9
Des Moines	11.05*	15.2
San Francisco	12.05	14.8
Portland, Ore.	12.1	15.1
Seattle	12.2	15.2
Spokane	13.8	16.8
Los Angeles	11.55	14.3

Tank wagon prices shown are for maximum one-time delivery discounts.

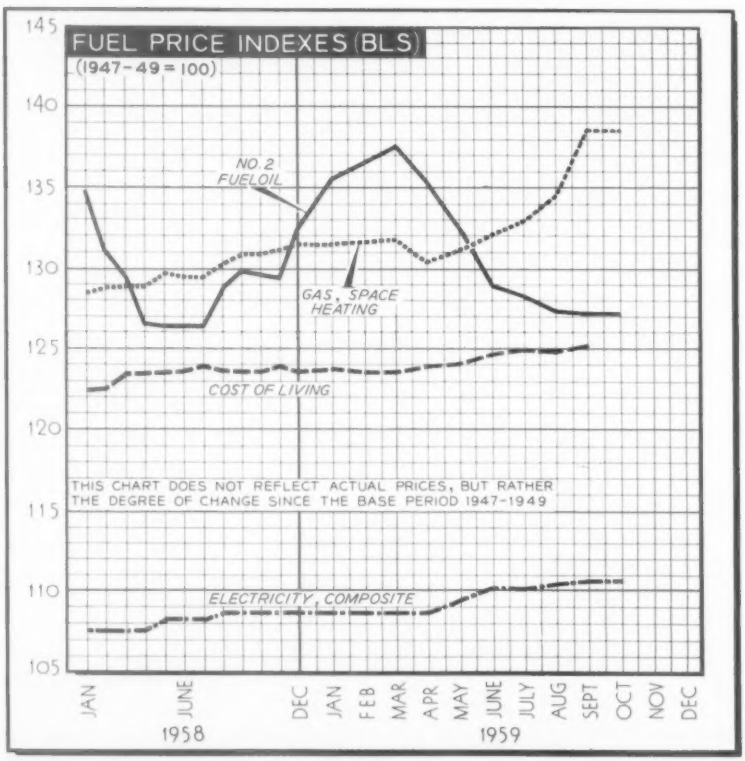
*Delivered.

†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West Coast this term more often indicates a retail sale to a large commercial account. This usually is a half cent below the tank wagon price.

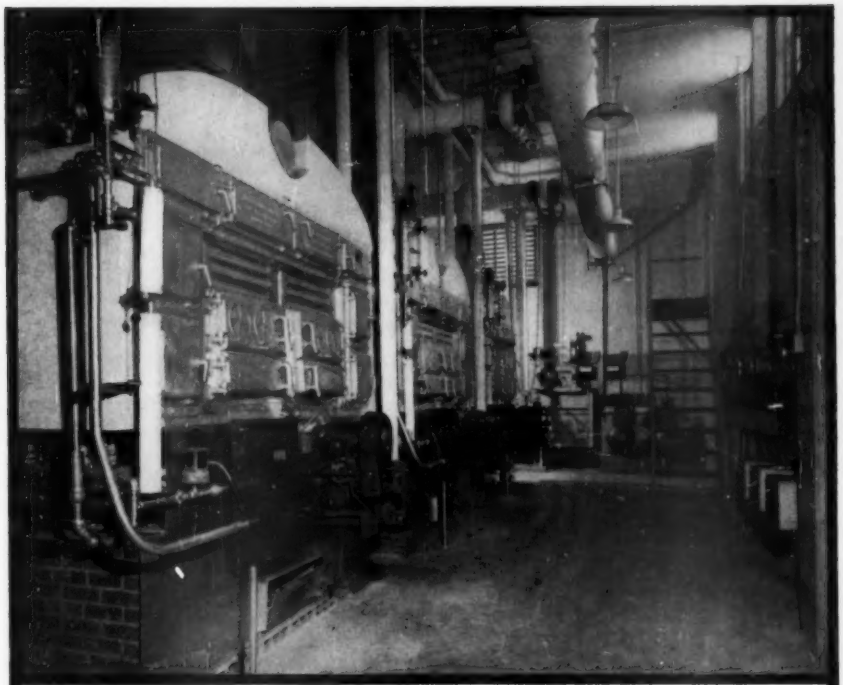
Degree Day Table

NOVEMBER *1959*		*Sept. to Nov. Normal*	*Sept. to Nov. 1959*
789	Albany AP	1362	1355
396	Atlanta AP	511	525
539	Baltimore CO	725	758
611	Boston (East) AP	1010	1009
784	Buffalo AP	1308	1283
422	Charlotte, N. C. AP	592	577
939	Chicago AP	1205	1407
714	Cincinnati CO	831	1032
769	Cleveland AP	1114*	1195
460	Dallas AP	352	533
815	Denver AP	1316	1524
1034	Des Moines AP	1252	1636
845	Detroit AP	1224	1345
937	Grand Rapids AP	1428	1538
736	Hartford AP	1184	1245
1219	Helena AP	1936	2222
309	Houston AP	188	316
878	Indianapolis AP	1090	1303
776	Kansas City AP	905	1109
23	Los Angeles CO	198	25
642	Louisville AP	862	894
1059	Milwaukee AP	1393	1705
1181	Minneapolis AP	1576	1967
235	New Orleans CO	146	348
595	New York CO	863	879
948	Omaha AP	1202	1496
551	Philadelphia CO	768	814
661	Pittsburgh CO	966	1001
786	Portland, Me. AP	1539	1489
554	Portland, Ore. CO	899	902
644	Providence AP	1160	1099
601	Roanoke, Va. AP	826	867
769	St. Louis AP	878	1057
814	Salt Lake City AP	1240	1406
146	San Francisco CO	475	292
1160	Sault Ste. Marie AP	1942	2077
541	Seattle CO	1003	1036
899	Toledo AP	1245	1467
545	Washington AP	793	768

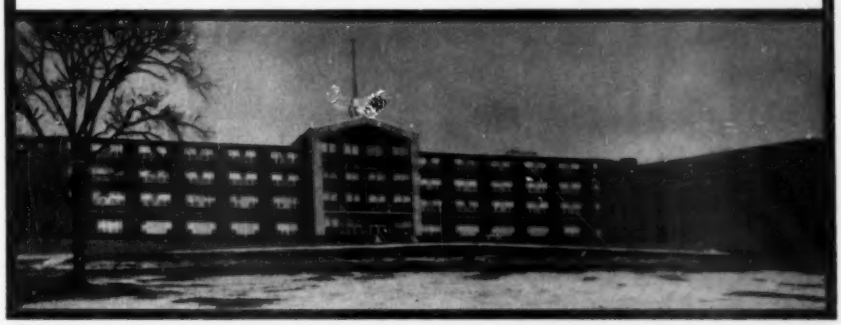
*City Office.



Three H. B. Smith Boilers Deliver 15 Million Btu.



St. Stanislaus Novitiate, "Shadowbrook," Lenox, Mass. *Architect:* J. Gerald Phelan, Bridgeport, Conn. *Engineers:* Fletcher-Thompson Inc., Bridgeport, Conn. *Heating Contractor:* M. J. Flaherty, Boston, Mass.



After a spectacular fire had destroyed the main building of the St. Stanislaus Novitiate — formerly the fabulous Berkshire residence of Andrew Carnegie — in Lenox, Massachusetts, the architectural firm of J. Gerald Phelan, Bridgeport, Connecticut was selected to design a new building. The result — a building as beautiful by mid-twentieth century standards as was the old Carnegie Mansion by the standards of its day. The boiler plant, designed by Fletcher-Thompson Inc., Engineers, consists of the three H. B. Smith No. 60-S-21 oil-fired boilers with combined capacities of over 15 million Btu. Thus dependable heat can be counted on for many, many years to come, for H. B. Smith cast iron boilers have a unique record of amazing longevity. Add their moderate initial cost, high efficiency, economy and extremely low maintenance cost and you have the reasons why H. B. Smith boilers deliver heat at the lowest possible costs per year.

H.B. Smith **CAST IRON BOILERS**

THE H. B. SMITH COMPANY, INC., WESTFIELD, MASSACHUSETTS • Est. 1853

fuel oil & oil heat

WILLIAMSON

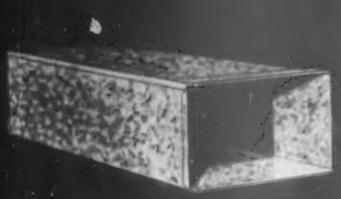
"Magic Brain"

HEATING AND COOLING

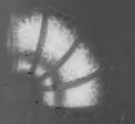
....works "Magic" for your sales!

*Seal-Tite** DUCT, PIPE & FITTINGS

AIR

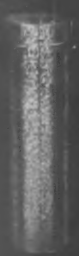


K. D. Rectangular Duct



Adjustable Elbow

Top Take-Off



Snap-Lock Round Pipe

Space Console Unit

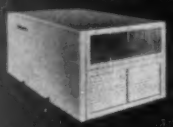
WARM AIR FURNACES

Special Series — Gas and Oil

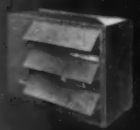
De Luxe Series — Gas

De Luxe Series — Oil

CONDITIONING UNITS



Self-Contained Unit
(cooling and condensing coils in one casing)



Air-Cooled Condensing Unit

THE INDUSTRY'S MOST COMPLETE LINE and THE INDUSTRY'S MOST UNIQUE SYMBOL

will help you make more heating and cooling sales

WARM AIR FURNACES . . . to fit any price range for the home owner or the builder.

AIR CONDITIONING UNITS . . . to fit practically any residential or light commercial need.

*Seal-Tite** **DUCT, PIPE AND FITTINGS** . . . to assure complete "magic comfort" with "Magic Brain" equipment!

NATIONALLY ADVERTISED to home owners and builders. Complete assortment of free literature, brochures, sales aids and tested selling plans.

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AMERICA'S HOMES

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Rush me information on your "MAGIC BRAIN" line of:
____Heating Equipment ____Cooling Equipment
____"Seal-Tite" Duct, Pipe & Fittings

Name_____Title_____

Firm_____

Address_____

City_____Zone____State_____

APPLICATION AND SIZING CHART

field

BAROMETRIC DRAFT CONTROLS

SIZES

CONTROL	FLUE
6"	5" & 6"
7"	6" & 7"
7" (Coal) Barochek	6" & 7"
8"	7" & 8"
9"	8", 9" & 10"
9" (Coal) Barochek	8", 9" & 10"

FOR FLUES 5"-10"

M

DOMESTIC FURNACES & BOILERS

OIL
COAL

FOR FLUES 5"-10"

RC

DOMESTIC FURNACES & BOILERS

SIZES

CONTROL	FLUE
6"	5", 6" & 7"
7"	6", 7" & 8"
8"	7", 8" & 9"
9"	8", 9" & 10"

SIZES

CONTROL	FLUE
10"	9" & 10"
12"	11" & 12"
14"	13" & 14"
16"	15" & 16"
18"	17" & 18"

SIZES

CONTROL	FLUE
20"	19" to 21"
24"	22" to 25"
28"	26" to 30"
32"	31" to 34"

FOR FLUES 9"-34"

M+MG2

COMMERCIAL & INDUSTRIAL FURNACES, BOILERS & INCINERATORS

OIL
GAS
OIL-GAS
COAL

M+MG2 Double Acting for gas

M+MG2 Single Acting for Oil

M+MG2 Barochek for Solid Fuels

USE WITH FORCED, NATURAL OR INDUCED DRAFT

A TRIPLE-FUEL DRAFT CONTROL

SIZES

CONTROL	FLUE
7"	6" & 7"
8"	7" & 8"

DOUBLE-ACTING

FOR FLUES 6"-8"

MG1

COMMERCIAL FURNACES & BOILERS

GAS

FOR FLUES 6"

INCINERATOR

FOR GAS OR FUEL-LESS DOMESTIC INCINERATORS

Size 6" Tee for Incinerators with 6" outlet. Preset at .03" for horizontal or vertical installation. 22 gauge galvanized steel Tee, Painted ring and gate.

Two sizes: 6" Tee for 6" flue and 6"-7" Tee for 7" flue. Adjustable for low, medium or high draft —.025, .045, .065. 26 gauge blued steel Tee, gate and stub, 24 gauge ring.

FOR FLUES 6"-7"

SA

SPACE HEATERS & RANGES

OIL
COAL
WOOD

FOR FLUES 6"-7"

RAA

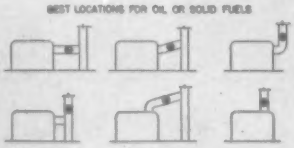
SPACE HEATERS & RANGES

Two sizes: 6" Tee for 6" flue, and 6"-7" Tee for 7" flue. Adjustable for low, medium or high draft — .025", .045", .065". 26 gauge blued steel Tee, gate and collar, 24 gauge ring.

WHERE TO INSTALL

BEST LOCATIONS FOR GAS

BEST LOCATIONS FOR OIL OR SOLID FUELS

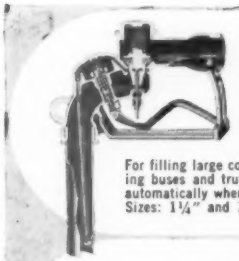


NOTE: Size equals ring diameter. The Field collar or "sleeve" permits easy installation on smaller and larger flue pipes.

FIELD CONTROL DIVISION — H. D. Conkey & Company — Mendota, Illinois

AFFILIATES:

Spartan Tool Division—Powered Sewer Cleaning Equipment
Materials Handling Division—Cranes, Hoists
Conco Building Products, Inc.—Brick, Tile, Stone

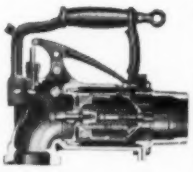


No. 1190

For filling large containers, fueling buses and trucks. Shuts off automatically when tank is full. Sizes: 1¼" and 1½".

No. 620

High pressure type for bulk plants, aircraft, and Diesel fueling. Sizes: 2", 2½", 3".



No. 210

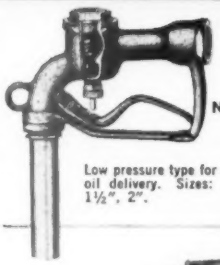
High pressure type for home fueloil delivery. Sizes: 1¼" and 1½".

OPW BULK LIQUIDS NOZZLES

for blending • filling • transfer

FULL FLOW • EASY SHUT-OFF • NO SHOCK • NO PRODUCT SURGE

MINIMUM PRESSURE DROP • PERFECT BALANCE • LOW MAINTENANCE

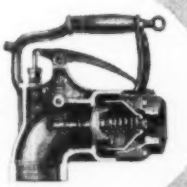


No. 190

Low pressure type for home fueloil delivery. Sizes: 1", 1¼", 1½", 2".

No. 220

Gravity, low pressure type for bulk plants. Sizes: 2", 2½", 3".



No. 516

Low pressure type for home fueloil delivery. Has "non-drip" spout. Sizes: 1½", 2".

Write for Bulletin F-9

OPW CORPORATION

2723 Colerain Avenue, Cincinnati 25, Ohio

Names in the News

Clyde H. Wilkinson has been appointed president, Air Conditioning Division, American-Standard. He joined the company in 1955 as manager of water heater products for the Plumbing and Heating Division. For the past year, he has served as acting president of the Air Conditioning Division. The Division's headquarters are in New York and distribution facilities are in Elyria, O.

O. V. Tracy has been elected to succeed *William Naden* as president of Esso Standard Oil Co., New York, and *Robert H. Scholl* succeeds *E. Duer Reeves* as executive vice-president. Tracy has been an Esso director since 1954 and a vice-president since 1956. His responsibilities on the board have included all of the company's refining and petrochemicals operations.

Scholl has been an Esso vice-president and director since 1954 and prior to that had been the company's general counsel.

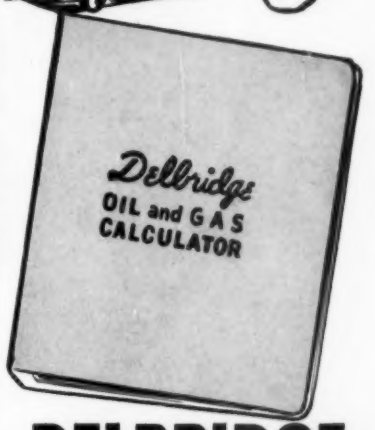
Tracy

Scholl

Both Naden and Reeves now are associated with the new Humble Oil and Refining Co., the former as executive vice-president and director, the latter as vice-president and director.

(*Please turn to page 23*)

Fastest, Easiest Way to Figure Fuel Oil Charges!



DELBRIDGE

Oil & Gas Calculator

Stop figuring fuel oil charges the old-fashioned, long-hand way! No more errors—no more dissatisfied customers!

Figure fuel oil charges fast—easily—accurately—with the DELBRIDGE Oil & Gas Calculator! Total amount of sale is *pre-calculated* for you without laborious long-hand figuring and errors—simple as finding a phone number!

Covers prices from 5¢ to 35¢ per gallon by steps of 1/10¢. Shows gallonage from 1 to 250 gallons by steps of 1 gallon—then to 5,000 gallons in easy steps.

Durable, long-lasting leatherette metal-ring binder. Only 5¼" x 6½"—fits easily in coat pocket. Guaranteed accurate by Lloyd's of London. Only $5.00 each.

Try the DELBRIDGE Oil & Gas Calculator for 10 days . . . *without obligation!* Prove to yourself how it can save time . . . cut down costly errors. Mail coupon for FREE 10-day trial. *Send no money!*

FREE TRIAL COUPON!

DELBRIDGE CALCULATING SYSTEMS, INC.
2502 Sutton Ave., St. Louis 17, Missouri

Send the DELBRIDGE Oil & Gas Calculator . . . *without obligation!* We will approve your invoice for $5.00 (plus postage) within 10 days if we decide to keep the Calculator.

Name.....Title.....

Company.....

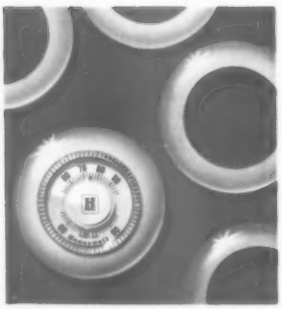
Address.....

City.....Zone...State.....

ANOTHER IN HONEYWELL'S DIAMOND JUBILEE PARADE OF PRODUCTS

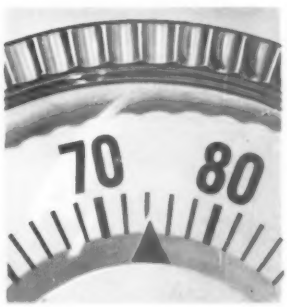
Only Honeywell could improve the world's finest thermostat

SEPARATE COMFORT SCALE
tells temperature at a glance, ends calls if pointers temporarily do not match.



NEW DIAMOND LUSTRE FINISH
Silver-gray tone blends with any decor. Snap off ring to repaint.

NEW PICTURE WINDOW DIAL
Easy on the eyes! Read it from afar without a squint—or error!



NEW EYE-SAVING NUMERALS
Big numbers make it easy to see and set exact temperature wanted.

Presenting the new Diamond Jubilee model of the world famous Honeywell Round Thermostat

Now! The craftsmen who designed the world's most wanted thermostat have made it more attractive than ever to your customers. It's easier to read, easier to set—and Honeywell is pre-selling this new Round with big persuasive ads like this, starting in the April issue of Better Homes and Gardens, continuing throughout 1960. It all adds up to greater consumer demand—and to greater profits for you, when you tie-in with a promotion of your own.

You profit many ways by handling Honeywell's complete line of controls. You have easier installation, simplified inventories, and prompt nationwide service when you need it.

For more information about Honeywell's new Round or other Honeywell products call your nearest Honeywell office, or write:

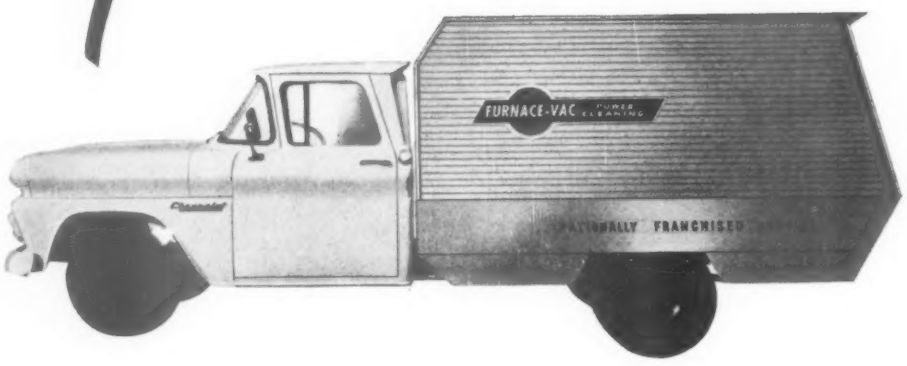
Minneapolis-Honeywell, Department DE012,
Minneapolis 8, Minnesota.

Honeywell

First in Control

SINCE 1885

Incomparable



The Very Finest in Power Cleaning Machines. New from Bumper to Bumper . . . The FURNACE-VAC Power Cleaner is Big . . . Powerful . . . Smart Looking. Your best advertising program 12 months a year exclusively yours to build a profitable cleaning business which will add many new accounts that will buy your products. Write, wire or phone for complete detailed information on this new cleaner plus our proven method to "Build A Profitable Service Program."

DELAMATER EQUIPMENT CO.
Rockford, Illinois

Robert A. Barr has been elected a vice-president, Babcock & Wilcox Co., New York, and has assumed charge of the Refractories Division. He replaces *James E. Brinckerhoff*, who retired after 40 years with the company. Barr has had more than 30 years of experience in the refractories field, and at one time was assistant general manager of Carborundum's refractories division.

Edward B. Tuttle has been elected director and vice president of manufacturing, Thatcher Furnace Co., Garwood, N. Y. He was formerly production superintendent. Before joining Thatcher in 1953, Tuttle had been employed by Rheem Manufacturing Co.

Emmett Wehmann has been promoted to assistant chief engineer, Liquid Meter Division, Neptune Meter Co., New York. He joined the company in 1936 and in 1955 became chief development engineer of Neptune's Engineering Research and Development Department.

William Feldermann, founder, president and chairman of the board, Walton Laboratories, Inc., Irvington, N. J., died November 13. Born in Plymouth, England, he was an associate member of the American Society of Heating and Ventilating Engineers and was a pioneer in the study and development of units for humidity control.

Myron D. Miller, Jr., secretary of the National Mineral Wool Association died on November 24 at the age of 36. Before joining NMWA he had served four years as secretary of two sections of the National Electrical Manufacturers Association.

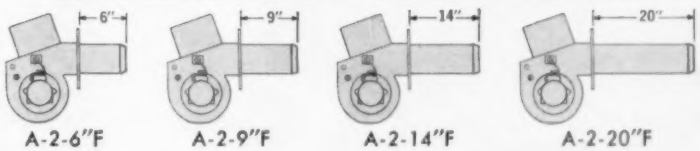
BELIEVE IT OR NOT!

an "8 in 1" OIL BURNER

★ The only burner in the world approved by all U.S.A. testing agencies for firing from .65 gph to 2.50 gph without any component changes except the nozzle. Thus a single burner will satisfy 95% of the installations encountered by the average dealer each year.

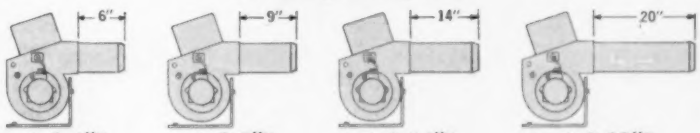
★ The only burner in the world which is convertible in the field to give dealers the equivalent of eight different burners. Thus, in a matter of minutes, you can convert a Rexoil A-2 into the following special-purpose burners.

Flange Mounting on New Boilers, Furnaces, and Water Heaters



A-2-6"F A-2-9"F A-2-14"F A-2-20"F

Pedestal Mounting for Replacing Obsolete Burners and Converting Existing Units



A-2-6"P A-2-9"P A-2-14"P A-2-20"P

★ The only burner in the world designed to give you "8-in-1" interchangeability on a minimum investment. Trade price of this complete Kit is only 15.9% of the amount you would have to invest in all 8 burners needed for the applications shown above.

Show this advertisement to your local Wholesale jobber today!

With each 8-in-1 Kit you get:

A-2-9"P Burner and Control Set
6" Tube and Electrode Assembly
14" Tube and Electrode Assembly
20" Tube and Electrode Assembly
Universal Cast Iron Flange

Each Rexoil installation automatically "sells" your next job!

REIF Rexoil INC.
Telephone WAshington 2420
37 CARROLL STREET
BUFFALO 3, N. Y.

. I've hit my earning stride..

...with my EXCLUSIVE

SUNHEAT FRANCHISE

"Once upon a time, I wasn't doing so hot. But let's forget about that. You're more interested in finding out why I'm riding so high now.

"The answer's easy. I'm a SUNHEAT distributor.

"It seems to me you can't go wrong when you've got all this working for you:

"Take the name Sunoco, for one thing. Everybody knows it. The Sunoco people have made sure of that with steady advertising. They've got a multimillion-dollar program going at full speed right now. It sure helps a lot, from my own experience, in selling SUNHEAT.

"SUNHEAT even supplies me with my own individual advertising program. Puts up half the cost of running it, too.

"But let's get down to SUNHEAT itself. I know it's tops. The Sunheat people tell me that it's a specially made formula . . . many different oils blended into a perfect heating fuel. It really boosts sales.

"From what I've told you, it sounds like the only thing you'd have to worry about would be other SUNHEAT distributors. But that's taken care of, too. My territory's my own—all mine for growth and profits. No tricks, no minimum gallonage either.

"What's more, Sun Oil helps you protect your profit margin.

"All in all, this SUNHEAT set-up is a darn good one. Maybe you'd like it too."

Exclusive territorial distributorships are available now in most marketing areas. Write today for information.

SUNHEAT

FUEL OIL DEPARTMENT

SUN OIL COMPANY

Philadelphia 3, Pa.

ORIGINATORS OF CUSTOM-BLENDED BLUE SUNOCO GASOLINES

THIS NEW LOW-COST FUEL USE COMPUTER

cuts your oil delivery costs—eliminates degree day calculating

There's no complicated calculating needed with the new low-cost *direct-reading* Fuel Use Computer. You're able to tell at a glance the amount of fuel consumed each day by your customers—able to schedule your deliveries to get more profitable use out of your trucks.

How does the Fuel Use Computer work? The rugged, easily installed roof-top measuring unit *continuously* relays the weather around you right to the compact recording unit on your desk. All you do is glance at the direct reading dials for the average fuel use at any time. The recorded "weather units" are displayed on four easy to read registers which indicate fuel oil use for customers who combine house and hot water heating as well as for those who heat house only. What could be simpler?

Just Check These Cost-Cutting Features

- Far Less Clerical Work—And You Use Your Present Card System
- No More Run-Outs—More Use Out of Your Trucks
- Easy to Read—You read "weather units" right off the dials
- Simple to Install—And Maintenance-free
- Safe—low voltage roof units

For more information on how you can cut your oil delivery costs with the new Fuel Use Computer, write today.

1996

HRB SINGER **HRB-SINGER, INC.**

90 Schureman Street New Brunswick, New Jersey

A Subsidiary of The Singer Manufacturing Company

Gurney elected President of Warm Air Association

WAYS AND MEANS to a retail profit occupied a major portion of the subject matter at the 46th Annual Convention of the National Warm Air Heating and Air Conditioning Association at St. Louis, December 2-4. For the first time the attention of the industry was focused on dealer management and merchandising of its products, rather than on technical considerations.

Growth and increased interest in the Silver Shield program, looking toward a better heating and/or cooling system for the customer, brought the retail side of the business prominently before the convention. Charters have been issued or are now in the process of being issued in Kalamazoo, Grand Rapids and Lansing, Mich.; Niagara Falls and Rochester, N. Y.; Nashville, Tenn.; Philadelphia and Sharon, Pa.; Milwaukee, Wis.; Lima and Mansfield, Ohio; Camden, N. J., and Portland, Ore. To back this effort in the dealer side of the business, the Board of Trustees voted an addition to the budget of more than $40,000 to add a man to the staff and promote training for the program among the dealer members.

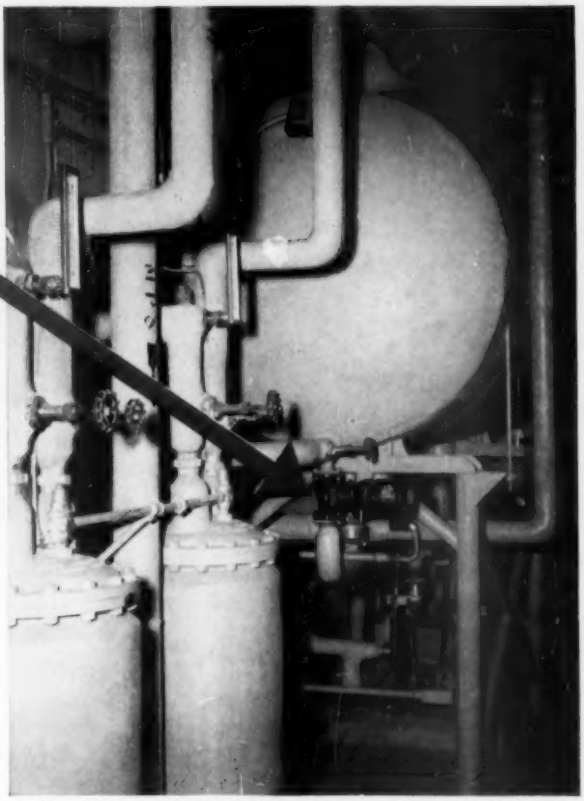
Harry C. Gurney, general sales manager of the Janitrol Heating and Air Conditioning Division of Midland-Ross Corp., was elected president of the Association for the year ahead. Don Winegardner, vice-president of The Majestic Company, was named first vice-president and H. C. Mueller, Jr., executive vice-president of Mueller Climatrol Div., is second vice-president of the Association. James M. Martin was elected secretary-treasurer, succeeding George Boeddener who retired after more than 20 years in the service of National Warm Air.

Gurney

Edwin O. George, vice-president of Detroit Edison Company, outlined the history of the electric heating in-

B&G ALL-BRONZE BOOSTERS

FOR LONG LIFE IN CIRCULATING HOT OR COLD RAW SERVICE WATER FOR FAUCET OR INDUSTRIAL USES

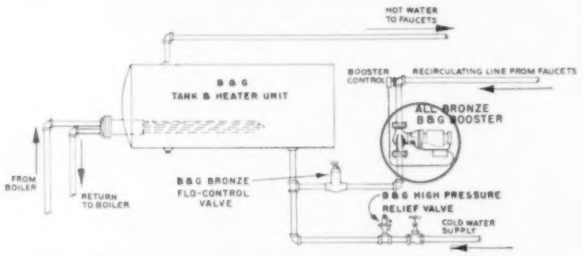


Where hot or cold service water is to be pumped, the use of an all-bronze pump is imperative. Otherwise, the corrosive effects of continuously pumping fresh water materially shortens pump life.

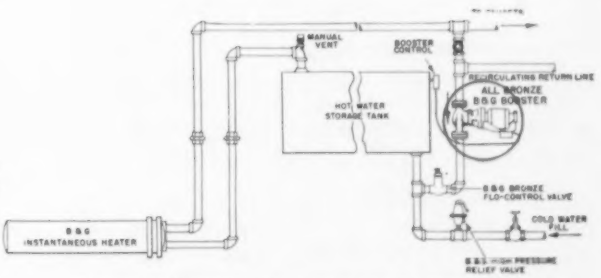
The B&G All-Bronze Booster is specifically built for service water pumping applications. In such systems, the Booster can be installed in numerous ways to step-up efficiency, increase hot water production and reduce heating costs. It is immune to corrosion, hence will give years of dependable service.

For *quiet* operation, failure-proof performance and long life, the B&G Booster is the *preferred* pump.

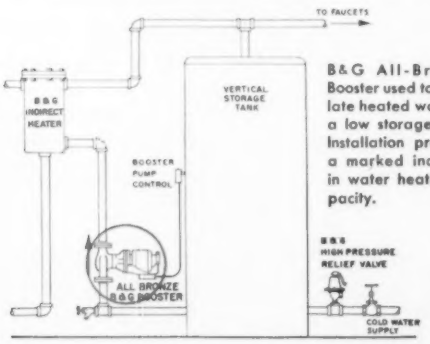
Installation of B&G All-Bronze Booster in Chrysler automatic transmission plant at Kokomo, Indiana. This small unit handles the circulating requirements of the service water heating system.



B&G All-Bronze Booster used on recirculating line from hot water faucets maintains hot water at fixtures at all times. Recommended on all installations, particularly where long plumbing lines are used.



All-Bronze B&G Booster used to provide an extra supply of hot water from an undersized boiler. Semi-tankless hook-up maintains initial supply of hot water.



B&G All-Bronze Booster used to circulate heated water to a low storage tank. Installation provides a marked increase in water heater capacity.

Send for Bulletin No. IA-856

BELL & GOSSETT
COMPANY
Dept. GA-7, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

dustry, and predicted that by the end of 1960 there would be 130,000 heat pumps in operation and 692,000 buildings warmed by resistance heating. (*Electric Heat & Air Conditioning* reports only 8% of the electric heating operating at the end of September, 1959, was ducted warm air, including heat pumps and electric furnaces).

Electric Heating

John Norris, president of Lennox Industries, Inc., asked for better control of electric heating through the use of low-voltage control systems. He said that present line-voltage controls were not sufficiently sensitive to temperature change and six to eight degrees of differential were not uncommon. He urged the use of ducted systems in electric heating as the only way to avoid odor and high humidity in the tight, thoroughly insulated homes that are demanded for electric heating systems.

A session presided over by Newt T. Hess, vice-president in charge of sales for Vorys Brothers, Inc., Columbus, O., heard Ray F. Horan, director of the Institute of Dealer Management for Janitrol, on "Hiring and Compensating Salesmen." Horan advised hiring middle-aged men with high school education after careful screening. He said that most men who were trained would rather work on straight commission. As an alternate for the small dealer he advised a split of the net profit for the salesman on each sale.

W. E. Bogen, vice-president and John Hensel sales manager of Bogen, Inc., Columbus, O., outlined a plan for training new salesmen through a system of school sessions and field work with the older salesmen.

J. P. Field, vice-president of Williamson Co., presided over a session on dealer management. Field, chairman of the Dealer Training Committee of the Marketing Council, spoke on the preparation of the sales presentation. Gary Baker, of the NWAH&AC staff, presented a new form for a preliminary survey of a warm air heating and/or cooling job. Forms and complete instructions have been prepared by the Association, making pos-

"WHAT'S IN IT FOR ME?
. . . When I use
Sid Harvey's Rebuilt Parts."

MORE PROFIT
Sid Harvey's Rebuilt Parts last longer. Fewer repeat calls help keep your Service Department in the black, and your customers satisfied. Sid Harvey's Rebuilt Parts with "Built-in Peace of Mind" protect your reputation. When you sell service contracts you need replacement parts that will stand up.

LESS LABOR
There are no installation problems when you install a Sid Harvey Exact Replacement, no piping or wiring changes. You save your serviceman's time.

FASTER SERVICE
Immediate exchanges are available from Sid Harvey's huge stock of exact replacements on most makes and models, obsolete as well as current. Sid Harvey's has it if it can be gotten.

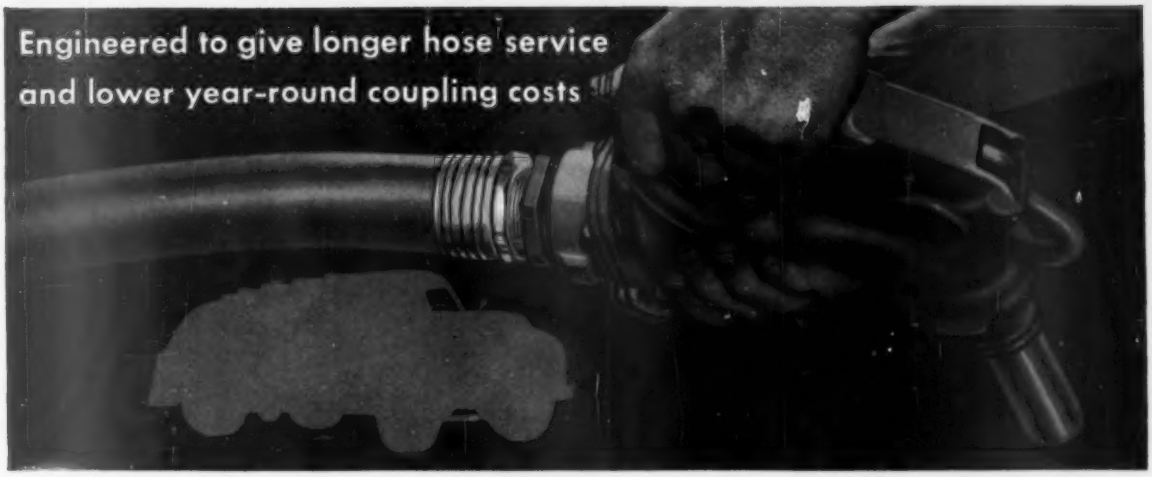
SAVE MONEY
Sid Harvey's Rebuilt Parts save you money in the long run. You save more because you get more.

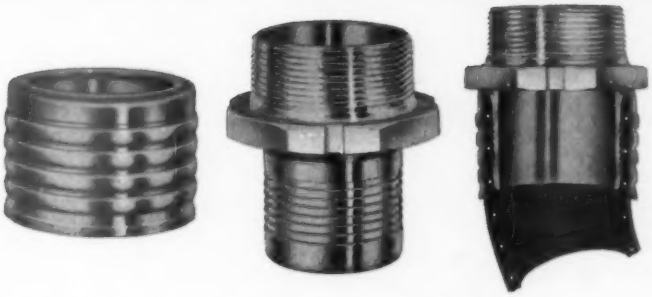
Write for Sid Harvey's Catalog on your firm's letterhead. It's FREE to the trade.

SID HARVEY INC.
VALLEY STREAM, NEW YORK

USED BY PEOPLE WHO VALUE THEIR REPUTATION

INTERNATIONAL





Economical 2-piece permanent fuel oil and gasoline hose coupling—available in seven sizes!

INTERNATIONAL RIB-LOX®

New brass permanent coupling is ideal for fuel-oil and gasoline tank-truck and airport service. Incorporates new exclusive International design features that mean easier installation, longer life, and trouble-free service. Ribbed ferrule minimizes internal stress, increases end-pull strength of coupling. Flared ferrule and tapered body shank prevent cutting or chafing of hose. Male and female are available in 1, 1¼, 1⅜, 1½, 2, 2½, and 3 in. sizes. Octagonal nuts are slotted for spanner wrench to make installation easy and quick. Rib Lox can be attached with any fuel oil coupling expanders now in existence.

Forged brass reattachable coupling for fuel-oil and gasoline hose

INTERNATIONAL DUBL-GRIP®

Reattachable 2-piece coupling requires only a wrench for assembly. Tapered stem and shell, wide flat body threads prevent cutting or chafing of hose. Provides rigid, leakproof connection. Available in male and female in 1, 1¼, 1⅜, and 1½ in. sizes. The industry's most widely used reattachable coupling.

International makes couplings for many applications, including Dubl-Guard® with internal spring guard construction to prevent kinking; Stream-Flo®, a permanent, one-piece, nonsparking coupling; and Super-Grip®, a reattachable coupling for high-pressure hose. For hose couplings of any type, write to International for data.

INTERNATIONAL COUPLINGS, INC. CLEVELAND 15, OHIO

Division of The Gabriel Company

fuel oil & oil heat

MR. HEATING & AIR CONDITIONING CONTRACTOR:

Get aboard the American

NO. 1: Deferred Payment Plan!

PRE-SEASON, don't tie up your working capital. We say *keep your money!* Your American-Standard Air Conditioning Division Distributor will ship you the furnaces and air conditioners you need for stock, pre-season installations and show-room display . . . and you don't pay a penny till June 1st!* And no interest!

NOW MR. DEALER, when you take on a small working stock, this enables your Distributor to restock his inventory immediately. Thus he's in an even better position to supply your requirements when the rush season arrives. "Filling the pipeline to the Consumer" is an important part of the overall American-Standard business building plan to put their dealers in the best possible position in their fight to capture the Profitable Spring Modernization Market.

*Subject, of course, to local credit restrictions.

NO. 2: Springboard to Profit!

Look what you get:

1. First quarter stock on deferred payment till June 1st . . . and no interest charge!
2. $100 worth of lighted signs . . . truck painting . . . billboards . . . etc. . . . FREE!
3. $28.30 worth of technical manuals . . . sales aids . . . displays . . . FREE!

That's what your American-Standard Air Conditioning Division Distributor is ready to give you, when you sign up by taking a small working stock on deferred payment during the first quarter. Here's a deal that will give you a running head start into fabulous modernization markets of the 60's!

SEE YOUR DISTRIBUTOR TODAY!

-Standard 1960 PROFIT EXPRESS!

DEFERRED PAYMENTS! SPECIAL PROMOTIONS! PRIZE VACATIONS-FOR-TWO! THOUSANDS OF GIFTS!

NO. 3: Old-Fashioned Bucks!

"Old-Fashioned Bucks" are the biggest bargain in money today! They are Gift Certificates that let you buy at WHOLESALE PRICES from one of the country's largest mail-order houses (you can use either "Old-Fashioned Bucks" or just plain cash). So all your money is worth at least 30% more!

"Old-Fashioned Bucks" are symbolic of the good old-fashioned *extra* quality and value we build into all our American-Standard warm-air furnaces. You will receive "Old-Fashioned Bucks" with every order you place for American-Standard furnaces.

Send for your *Big 600 Page Wholesale Bargain Catalog TODAY* . . . buy American-Standard furnaces . . . and get your share of these good "old-fashioned bucks"!

NO. 4: Trav-O-Rama!

Win exciting all-expense-paid vacations for two! *You pick where you want to go and when you want to go!* Bermuda . . . Miami Beach and Nassau . . . Las Vegas . . . Mexico City and Acapulco . . . Miami Beach and Havana . . . . Hollywood and San Francisco . . . Jamaica . . . Mackinac Island . . . Colorado Springs . . . Miami Beach!

It's so easy to win, it's undoubtedly the air conditioning industry's most exciting vacation sales contest for dealers. See your American-Standard Air Conditioning Division Distributor today. He'll give you all the details. We can tell you this: the sooner you enter the contest, the easier it is to win. So act fast! You'll like Trav-O-Rama!

American-Standard Products

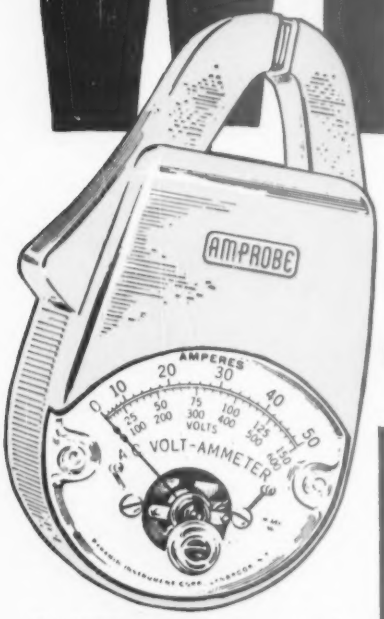
AMERICAN-Standard

AIR CONDITIONING DIVISION

ELYRIA, OHIO

fuel oil & oil heat

WHY settle for an ordinary voltage tester?



Ask yourself these questions	The AMPROBE Junior	ordinary voltage tester
Does it measure current as well as voltage?	YES	NO
Does it give you full visibility on a graduated reading scale?	YES	NO
Does it fit conveniently in your pocket?	YES	YES
Does it measure within ±3% accuracy?	YES	NO
Does it come in a full line of models to meet different problems?	YES	NO
Does it protect you against shorts and shocks?	YES	YES
Does it balance loads, locate grounds, determine motor overloads, check rating of circuit breakers?	YES	NO

The AMPROBE Jr. gives you so much more... not just a run-of-the-mill voltage tester but a precision-made instrument that measures voltage *and* current instantly and accurately without shutting down equipment. All this with one rugged and inexpensive pocket-size tool! And now...FOR THE FIRST TIME...at the request of utilities, industrial plants and other large-scale users of AMPROBES, the AMPROBE Jr. has gone SAFETY YELLOW to conform with standard safety practices.

PICK THE AMPROBE YOU NEED! There's an Amprobe for every job, every budget: from 10 amps and 250 volts to 1200 amps and 600 volts AC; from $19.85 to $67.50. And with the Amprobe RS-3, you get a volt-amp-*ohmmeter* all in one pocket-sized, snap-around precision instrument. Every Amprobe comes with test leads; most with top grain cowhide leather case at no extra cost. See the complete Amprobe line at your jobber's today.

Amprobe Jr.®

snap-around volt-amp tester

$19.85

PYRAMID INSTRUMENT CORP., Lynbrook, New York

sible a fast and accurate survey of the house for estimating prior to a complete heat-loss survey. Instructions together with a pad of forms are available from National Warm Air headquarters in Cleveland.

Roland R. Taylor of Fraser & Johnston Co., presided at a session during which Herbert T. Gilkey, director of Technical Service for the Association predicted smaller and more efficient heating and cooling systems in the future. Heating plants may well be fired by catalytic burners that produce heat from the fuel without flame.

Two luncheon sessions were addressed on successive days by Paul M. Butler, chairman of the Democratic National Committee and Thurston B. Morton, chairman of the Republican National Committee. Both predicted victory for his party, but neither would name a candidate.

Registration at the convention was just under 500 members and guests.

Board of Trustees

Re-elected to the Board of Trustees for a second two year term were: Charles H. Franke, American Furnace Co., St. Louis; Gordon Rieley, Lennox Industries Inc., Columbus, Ohio; and Roland R. Taylor, Fraser & Johnston Co., San Francisco, California.

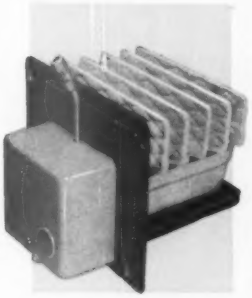
Four new Trustees elected at the convention were: Paul M. Augenstein, Airtemp Division, Dayton, Ohio; Ronald N. Campbell, The C. A. Olsen Mfg. Co., Elyria, Ohio; Robert L. Leigh, Air Control Products, Inc., Coopersville, Mich.; and Kent L. Wilson, Minneapolis-Honeywell Regulator Co., Minneapolis.

Continuing in their elective positions as members of the Board of Trustees are: Harold W. Mutz, The Peerless Corp., Indianapolis, Ind.; Wright C. Percival, Green Colonial, Inc., Des Moines, Iowa; Homer F. Brundage, The Brundage Co., Kalamazoo, Mich.; Eugene J. Cullen, Inland Steel Products Co., Milwaukee; and H. F. Randolph, International Heater Co., Utica, N. Y.

As immediate past president of the Association, Tom Byrd, Lau Blower Co., Dayton, Ohio, becomes an ex-officio member of the Board.

Skuttle.....offers you the most complete line of Humidifiers and Filters!

MODEL 711 Counter-Balanced Humidifier



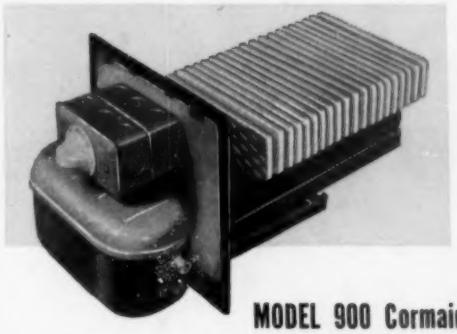
This highly efficient, low-priced unit requires one installation, one adjustment. It is shipped completely assembled with 5 Vapoglas plates and stainless steel plate rack. The Model 711 is compact, easily installed, trouble-free, and is self compensating for all water pressures. This compact unit can be a sales leader for you in 1960.

MODEL 2001 Defensor

This Skuttle Defensor Electric Humidifier operates on an atomizing aerosol principle. This produces a suspension of fine liquid particles in air, as fog or mist. The cold mechanical injection into an air stream is by far the most expedient technically and economically. With an output of over 1 gallon of water per hour, it is simply connected to the plenum or air duct.

MODEL 600-B Humidifier

The Model 600-B can be used with sloping bonnets or straight plenums in gravity or forced air furnaces. The pan and leak-proof blown glass float are standard with 5 No. 490 Vapoglas Plates. This model assures constant, effective humidity. Output can be increased by adding up to 20 Vapoglas Plates.



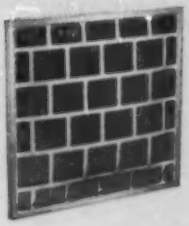
MODEL 900 Cormaire

THE NEW PACKAGE HUMIDIFICATION SYSTEM. This high quality, flexible unit is designed to provide controlled humidification during the entire heating season. It uses 20 Vapoglas plates in a corrosion resistant evaporating pan. Used as a Vapoglas plate humidifier, the Model 900 usually provides adequate humidity in the spring and fall. As a controlled humidifier, the output can be increased by setting the cycling switch that controls the electric heating element. This switch is standard equipment on the Cormaire. As a completely automatic humidifier, the Cormaire is placed in the plenum, and a relay transformer and humidistat are added as optional equipment. As an added feature, a Hygrometer is furnished with every Model 900 Cormaire.

NEW LOW-COST DusT-ban FILTER

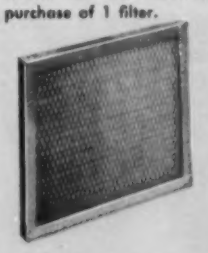
The electrostatic action of Skuttle DusT-ban Filters guarantees the removal of dust, dirt and pollen particles, yet allows the free flow of air for maximum heating or cooling efficiency. They are completely washable and **never need oiling.**

4 popular sizes. $4.95 ea.



FREE Filter Gage (value $1.95) is your tie-in for increased sales. Your customers will receive a free Skuttle filter gage with the purchase of 2 Skuttle DusT-ban filters or $1.00 with the purchase of 1 filter.

SKUTTLE-AIRE PERMANENT FILTERS. Designed for heavy duty commercial and industrial applications, as well as domestic heating and cooling systems, these sturdily built filters are easily washed with cold water and **never need oiling.**



Write today for complete information on the Skuttle line.

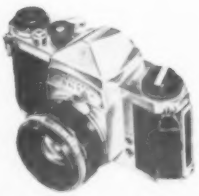
Skuttle MANUFACTURING COMPANY • Milford, Michigan

IN CANADA: WAIT SKUTTLE CO., OAKVILLE, ONT.

fueloil & oilheat

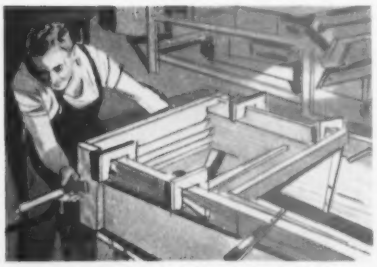
ANOTHER DIAMOND JUBILEE EVENT

Honeywell's Big Win



You may win this authentic reproduction of a 1901 Oldsmobile or one of ten $179.50 deluxe Heiland Pentax 35mm Cameras!

The "Merry Olds" is America's most unique innovation in motor car travel in half a century! Its top speed is 35 m.p.h. and it gets 65 miles to the gallon! This promotion-minded car is an old-fashioned seven feet, nine inches long and comes in black, bright red and wheat-yellow colors. Except for a few concessions to modern engineering advances, the "Merry Olds," in appearance, is an almost exact replica of the 1901 Oldsmobile!



Hand-Crafted . . . The "Merry Olds" has the individual attention of skilled craftsmen. This incomparable touch of workmanship is your guarantee of fine quality built into every car.

Promotions . . . The attention-getting "stopper" value of the "Merry Olds" is a powerful sales promotion factor guaranteed to stimulate customer interest in your business.

Car of Many Uses . . . Whether it's marketing for mother or motoring the children, the "Merry Olds" is excellent for fun as well as business. So, send in your entry today!

-A-Wagon Contest!

- Four rugged silicone diodes replace rectifiers formerly used, to provide more rugged construction, reduce heat dissipation and assure long life.
- 30% fewer tubes used than in former models—now encased in protective tube shields.
- Simplified electronic timing—one tube provides pre-purge, post-purge and trial for main flame ignition timings.
- New armored back—plus zinc-plated dichromate finish for increased resistance to corrosive industrial atmospheres.
- Fits same mounting cabinet as former model of the R478 for fast, easy replacement.

Now! Unmatched flexibility in a flame safeguard! Never before has one flame safeguard offered you so many applications and performance advantages: electronic flame detection, unparalleled sequencing flexibility, convenient voltage selectability, simplified electronic timing and many other features.

This new gold-colored R478 Protectorelay* is *transistor*-powered for long, trouble-free life. New armored back and zinc-plated dichromate finish wards off the effects of industrial atmospheres. And, you have your choice of flame detection: the R478A Protectorelay can be used with the foolproof new C7012 ultraviolet flame detector to sense both gas and oil flames, and can also be used with either flame rods or standard photocells. The R478B Protectorelay is used with a lead sulfide cell which can detect both gas and oil flames.

USE YOUR PROFESSIONAL SKILL! Estimate how many cycles this new Honeywell Flame Safeguard will make under rugged torture-testing!

Here's a chance for you to win an exciting new automobile or one of ten Heiland Pentax 35mm cameras—just for using your professional skill! Simply estimate how many cycles Honeywell's new Flame Safeguard will make under rugged torture-testing. To date, the Safeguard has completed 50,000 cycles—equivalent to over three years of normal use—and is still going strong.

Then, fill out and return the attached coupon, telling us your name, occupation, and your estimate as to the number of cycles the Flame Safeguard will make. The individual whose estimate comes closest to the correct number of completed cycles will win the sporty "Olds." The ten next closest estimates will win Heiland Pentax cameras. You may *revise* your estimate as often as you like providing that you use an entry blank (or reasonable facsimile) and that your entry is postmarked before the official end of the contest (the day the R478 stops cycling or May 15th—whichever occurs first). Earliest postmarks will determine winners in the event of ties.

Contest is open to dealers, installers, servicemen, consulting engineers and manufacturing personnel in the commercial-industrial boiler or burner business.

How the "torture test" will be conducted: Under simulated working conditions, the R478 will be heated to its maximum ambient temperature, with representative burner controls attached. Varying cycling rates will simulate potential power failures.

*Trademark

Honeywell

First in Control

SINCE 1885

75 YEARS PIONEERING THE FUTURE

Minneapolis-Honeywell
Dept. FH-1-15
Minneapolis 8, Minnesota

Name ..... *Title* .....

Company ..... *Address* .....

City ..... *State* .....

My occupation is: (Check one) ☐ O.E.M. ☐ Distributor ☐ Dealer, installer or serviceman ☐ Consulting Engineer

My prime interest is (Check one): ☐ Burners ☐ Boilers

I think the new Flame Safeguard will make.....cycles.

fuel oil & oil heat

you'll notice a big difference

DELAVAN

TYPE "W" NOZZLE-the industry's only "all purpose" nozzle

Delavan's type "W" may be used in any burner (from .50 GPH thru 1.35 GPH) regardless of air pattern. This means you can eliminate the practice of trying two or three nozzle patterns to get a good fire. Now, *one quality nozzle* insures good performance . . . saves you time and worry on those small burners.

Another exclusive — Bi-Metal Construction — only Delavan uses a brass body with stainless steel metering parts. Brass is used because it conducts heat away from the nozzle faster *after burner shutdown*. This helps to reduce the build-up of varnishes inside the nozzle that clog or distort the spray. Stainless steel is used in the orifice and distributor to provide durability in those parts where wear might be a factor.

From the world's largest nozzle manufacturer Delavan is the largest manufacturer devoted exclusively to the design and production of nozzles. Another reason why Delavan nozzles are your best assurance of quality and performance.

Ask your jobber, or write for free literature.

DELAVAN
Manufacturing Company
WORLD'S LARGEST MANUFACTURER OF NOZZLES • WEST DES MOINES • IOWA

Canadian Representative
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12 Leswyn Road
P.O. Box 608, Station T
Toronto 10, Ontario, Canada

Heating Wholesalers have Symposium on electric Heat

AT THE 13TH Annual Convention of the North American Heating and Air-conditioning Wholesalers Assn., held at St. Louis November 29-December 2, one of the chief points of interest was a very lively panel on electric heating. These six men participated: S. S. Sansbury, Union Electric Co., St. Louis; Robert Barr, Oil Heat Institute of Long Island; Richard Cullom, Gerwin Industries, Michigan City, Ind.; R. G. Nelson, Northern Illinois Gas Co., Bellwood, Ill.; O. U. Mutz, Peerless Corp., Indianapolis, and Frank Green, Heating Wholesalers Co., Des Moines.

Barr led off by accusing some of the electric heating industry economists of being "Pie in the sky" boys because of differences in their estimates of the number of heated homes and their future projections. He noted that the oilheating industry has been sound asleep and unprepared to fight it as it is fighting gas competition. He feels, however, that electric heat will compete more with gas than with oil because of the geography in the picture. The largest electric heating market is south, spreading from the TVA territory, and there's very little oil heat around there. He noted that oil men must put up a good fight in the Pacific Northwest for that is the second strongest electric heat area and it is a very significant oil market.

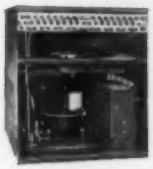
Barr also told the group about the research being sponsored in the fuel-oil industry and predicted the introduction of at least four new oilburning concepts quite soon. He put special emphasis on the point that electric heat has grown because it is being vigorously sold, not just bought.

Nelson, the second participant, told the group that gas has become the country's fifth largest industry in point of sales. He noted that in contrast to electric utilities, gas has a winter peak and it must build a summer load, hence its strong new emphasis on air-conditioning. He sees future energy applications as departing widely from what we know today. As an example, he mentioned a new Allis-Chalmers 20 hp tractor operated at 85% effici-

NEW! NEW! NEW!

NEW SUMMER AIR CONDITIONING UNITS . . .

For the expanding summer cooling market in 1960, Moncrief has developed new Air Cooled Condensing Units for outdoor installation with a top-mounted condenser coil through which air is exhausted at low velocity, while providing peak performance so quietly that noise nuisance is minimized.



Air Cooled 2 or 4 H.P. Condensing Unit . . . Top Exhaust with Low Velocity. 3 and 5 H.P. Units have Top Exhaust with Centrifugal Blower . . . U.L. Approved for Outdoor Installation

Blower-Evaporator Air Handling Unit

Counterflow Evaporator Coil

Circular Plenum-Type Evaporator Coil

Duct-Type Evaporator Coil

2, 3, 4, 5 H.P. COMPLETE LINE

175,000 or 200,000 Btu Winter Air Conditioner in One Completely Assembled and Wired Unit

80,000, 100,000, 120,000, 140,000 Btu Low-Slender Horizontal Furnaces

75,000—260,000 B.T.U. COMPLETE LINE

NEW GAS WINTER AIR CONDITIONING UNITS . . .

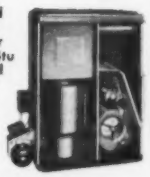
A complete new line of four sizes . . . 80,000 - 140,000 Btu . . . Moncrief Gas Fired Horizontal Furnaces are designed with add-on cooling in mind and have as standard equipment blower with large air delivery for cooling. Compact and low, these new furnaces also afford exceptionally flexible installations.

For large capacity installations, Moncrief offers you 175,000 and 200,000 Btu Gas Furnaces, completely assembled and wired in a single casing.

NEW OIL WINTER AIR CONDITIONING UNITS . . .

With a round combustion chamber and refractory firebox, Moncrief Oil Furnaces are remarkably free of expansion and contraction noise. And Moncrief's new 1960 assembled and wired Winter Air Conditioners are virtually as easy to install as a gas unit. 4 sizes of Basement Units and 3 of Horizontal Furnaces have increased air handling capacities for cooling.

Assembled and Wired Winter Air Conditioner 84,000-112,000 Btu Burner Exposed



Assembled and Wired Winter Air Conditioner 84,000-119,000 Btu Vestibule and Door

78,400—224,000 B.T.U. COMPLETE LINE

ALWAYS AHEAD OF THE MARKET!

Moncrief Celebrates 65 Years of Premium Manufacturing

Since 1895, Moncrief has contributed substantially to the success of thousands of dealers and jobbers with premium Furnaces and air conditioners. Moreover, throughout the past decade, ever-increasing sales and advanced manufacturing methods have made it possible to supply these premium Moncrief Units at low competitive prices.

Beginning a new decade, Moncrief brings you outstanding new units, priced to give your business premium profits.

If you want to get ahead of the market in 1960, call your Moncrief Wholesaler now.

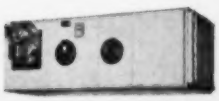
Heating and Air Conditioning Units

MONCRIEF

THE HENRY FURNACE CO. • MEDINA, OHIO

Furnace Pipe and Fittings

MONCRIEF SINCE 1895



89,600, 106,400, 123,200 and 224,000 Btu Low-Slim Design Horizontal Furnaces

THE MOST COMPETITIVE . . . MOST COMPLETE LINE IN 65 YEARS

Year 'Round Combination Summer Winter Air Conditioning Units

Gas Fired Unit Heaters 5 Models

Gas Conversion Burners

Gravity Furnaces for Gas or Oil

Coal Fired Winter Air Conditioners and Gravity Furnaces

Now... Increase Your Furnace Cleaning BUSINESS and PROFITS!

Get in on the profitable furnace cleaning business with a minimum investment and insure maximum returns. The General "HANDYMAN" Furnace Cleaner is built with more power (up to 40 H.P.) and greater capacity than any other cleaner available today. Now . . . you can contract for all types of residential, commercial and industrial cleaning jobs.

Investigate all the advantages of the General "HANDYMAN" Powervac Furnace Cleaner before you buy furnace cleaning equipment for your shop. Send for our *Profit Portfolio with* complete information and prices on the "HANDYMAN" and other General Furnace Cleaners. Do it now . . . and start profits rolling your way from more cleaning jobs, more repair jobs and more replacement part sales for a profitable 1959.

Phone, wire or write Today!

Wm. W. Meyer & Sons, Inc.
8261 Elmwood Ave.
Skokie, Illinois
phone
INdependence 3-5127

Check these "Handyman" Features:

SPACE-SAVING MODERN DESIGN

No other cleaner is so compact and has the eye appeal that builds sales. Yet, it looks and is ruggedly built. It can be used off the street in driveways and other spots where big bag cleaners made it difficult to work.

ONE MAN OPERATION

Truly a "handyman" in your service line-up. One man can set-up and operate this modern furnace cleaner . . . doing an average of 5 or 6 residential jobs in one day.

SELF CLEANING FILTER BAGS

Made of heavy duty sateen. Abrasive or hot ashes and soot do not come in contact with bags. No danger of bag "blow-out". Bags collapse into top of unit when not in use.

FAST ALL WEATHER OPERATION

Cleans average system in one hour or less. Operates efficiently in rain or shine. Adds 30 to 60 more days per year to your work schedule . . . adding extra profits for you.

LOW MAINTENANCE

Clean 60 jobs or more before 75 cu. ft. hopper needs cleaning out. Hopper has large clean-out door for fast removal of soot and ashes. Convenient hose storage for up to 100 ft. all coupled and ready to go. 2 built-in tool boxes. The General "HANDYMAN" Powervac Furnace Cleaner is adaptable to most ¾, 1 and 1½ ton trucks.

ency on a battery of fuel cells. On gas heating growth he pointed to his own company which in ten years has seen 50,000 heating accounts increase to 325,000 today.

He doubts that atomic-produced electricity will be a threat in our time, citing the experience of Commonwealth Edison's atomic plant where it costs 2.7¢ a kwh to produce, while electricity in the area is selling for house heating at 1.75¢. The production cost of gas is typically only 10-13% of sales.

Economics of electric Heating

Sansbury, third speaker, emphasized that the economics of electric heating has little relation to the Btu cost of the energy. He showed examples of houses heated with all fuels, found electric heating cheaper than either oil or gas although the electrically-heated instance had much more insulation. The cost of heavier insulation in a six room house runs about $350 more than ordinary FHA standards for other fuels, but the electric installation costs at least that much less than an oil or gas job, he finds.

Speaking of the standards of performance required by his company, Sansbury says they must start with a good reputable dealer, UL approved equipment, good facilities for maintenance. The heat loss of the house must not exceed 28 Btu per hour per sq. foot for a 70° design temperature. On heat pump jobs, which Sansbury personally favors, the installer must show that the unit has plenty of resistance heating to cut in below 20° temperatures. He urged the warm air manufacturers to take advantage of the inherent virtues of electric heat to provide new types of warm air heating systems, not just heating elements in an old shell.

The fourth panelist, Collum, said that the coming of electric heat has rocked us on our heels. The electric utilities, he complained, came on the scene with a greater volume of advertising and sales promotion than ever before seen in the heating field. He objects to a "fuel source" championing a "heating method," feels that the two should be forever distinct.

(*Please turn to page* 42)

the quality tells . . . the quality sells

new JANITROL

OIL-FIRED WINTER AIR CONDITIONERS

QUIET . . . CLEAN . . . CARE-FREE

Convertible to gas — adaptable for
Janitrol ADD-ON summer cooling

a new concept of QUIET performance
to help you sell and grow with

JANITROL

OIL-FIRED WINTER CONDITIONERS

Time was when you *had* to put up with noise and vibration in your oil-fired furnace installations. And then came this great Janitrol oil-fired winter conditioner line—and with it a whole new concept of quietness and automatic efficiency in performance!

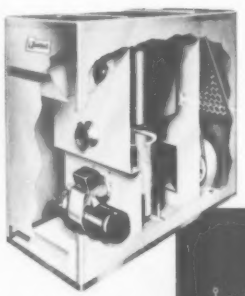
Now noise is needless! Now you can provide gentle, *quiet* warmth (new fuel economy, too!). Do away with profit-draining service call-backs and complaints. These new Janitrols put the damper on noise so effectively you'll scarcely believe your ears when the powerful Jet-Omizer burner and floating blower and motor go into action!

Their clean-lined beauty and compact design is easy on the eyes—saves space. And all models are designed for easy conversion to gas and addition of summer cooling.

Ask your Janitrol representative for all the facts on this great Janitrol automatic oil-fired winter conditioner line. Or, mail the coupon to us today. Get set to sell and grow with Janitrol!

JANITROL LOW-BOY MODEL OFLS-65 . . . a masterpiece of design, ideal for installation in basement recreation areas.

You can stake your reputation on JANITROL® Quality



Janitrol Heating Heart . . . exclusive design, fabricated from full 14-gauge steel, all-welded construction. Far quieter, more durable and more easily accessible than ever before.

Jet-Omizer High Pressure Burner . . . Super-powerful to thoroughly atomize fuel and mix it uniformly with air for clean, complete combustion.

Compact, Insulated Cabinets . . . Save space. Insulated to minimize heat transmission and provide utmost quietness in operation. Lustrous baked enamel finish.

Adjustable Leveling Bolts . . . "Adjustabolts" at corners of cabinet base simplify leveling the conditioner. Solid base plate on Low Boy adds rigidity, keeps out dirt and dust.

Factory Assembled . . . all models require only addition of burner, refractories and controls at the job. You save installation time and labor.

Fully Automatic Controls . . . The last word in convenience . . . Assure more uniform heating with maximum safety and economy for all conditions.

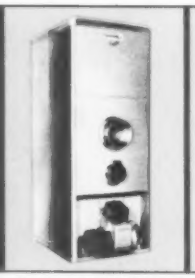
Pre-Fabricated Wiring Harness . . . Makes your installation job easier and faster, keeps you in the profit zone.

Models For All Needs . . . Btu. output at Bonnet from 84,000 to 250,000.

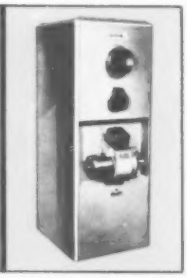
Adaptable for full-performance cooling with JANITROL ADD-ON COMPONENTS

Janitrol ADD-ON Cooling is **waterless,** requires only air and electricity for operation. Uses same ducts, blower and filters used for heating. May be installed with furnace, or any time later, to provide refreshing summer comfort—and more profits for you!

Janitrol HORIZONTAL Model OFLS . . . for space saving installation in attic, crawl space or basement. 84,000 to 250,000 Btu/hr. output.



Janitrol DOWNFLOW Model OFDS-65 . . . for perimeter heating systems. Compact, quiet, space-saving. Install in closet, alcove, utility room.



Janitrol HI-BOY Model OFVS-65 . . . especially designed for installation where floor space is limited—basement, utility room or closet.

Call WESTERN UNION Now!

Address Your Collect Wire to:

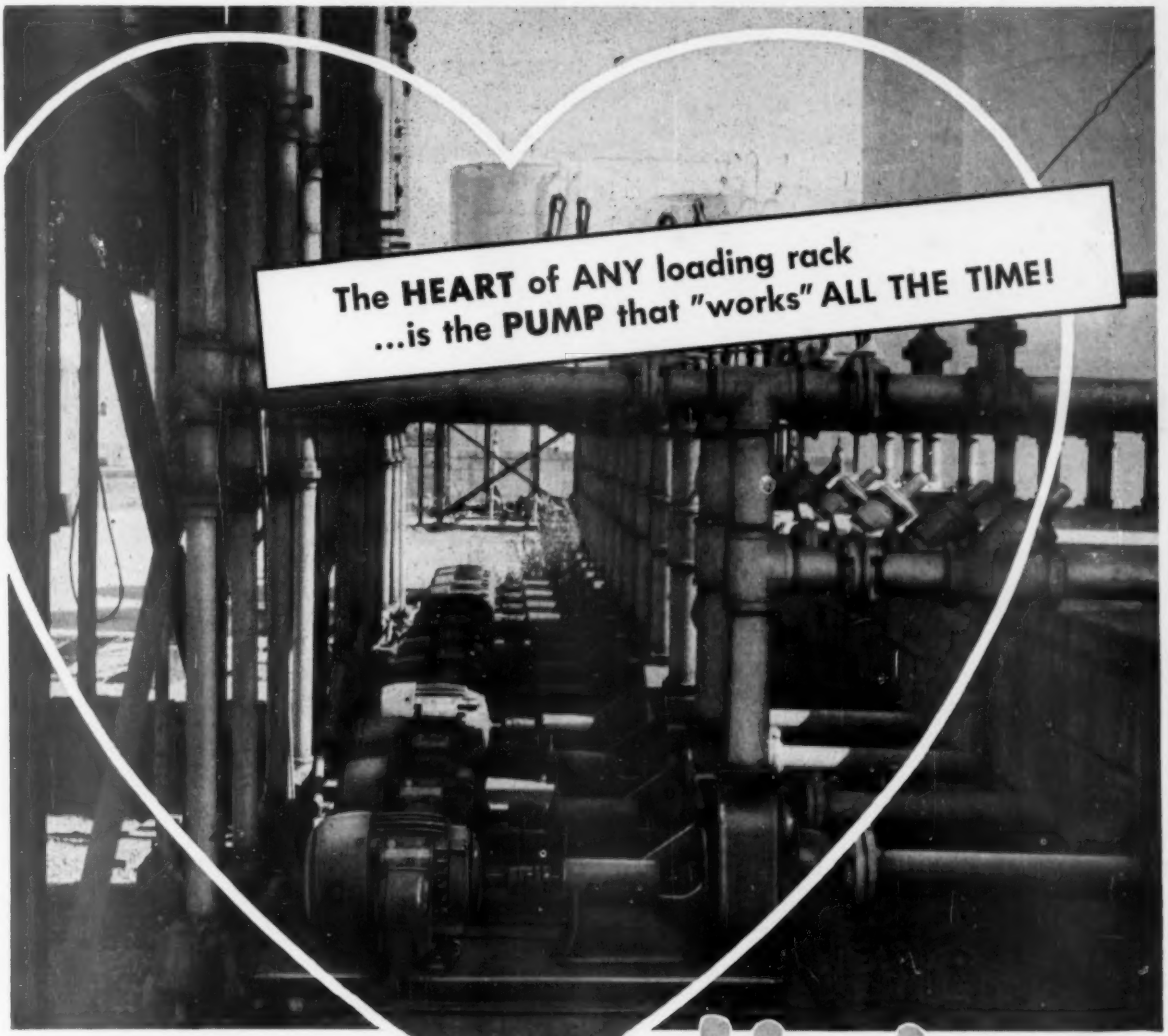
HARRY C. GURNEY, General Sales Manager
Janitrol Division, Surface Combustion Corp.
Columbus 16, Ohio (In Canada: Wire Moffat's Ltd., Toronto 15)

JUST SAY—"Rush me full details on Janitrol Select Dealer Program"

You'll do better by far as a . . .

JANITROL SELECT DEALER

WIRE COLLECT NOW for proof . . . and a preview of the profitable future that's yours to enjoy!



BRONOCO *cuts loading time of EXOTIC LIQUIDS with* Marlow....

The Bronoco Solvent & Chemical Company, Division of R. J. Brown Co., serves industry in the Cleveland and Northeast Ohio area. The firm handles a complete line of petroleum solvents including alphatic petroleum naphthas, aromatic solvents, chlorinated solvents, glycols, glycol ether solvents, alcohol, ketones and esters.

To speed delivery of these liquids to industry, Bronoco installed 24 Marlow, 32 HELP-9, Self-Priming Pumps on their loading racks. The pumps are used for barrel loading as well as for filling tank trucks for bulk delivery. During their 2½ years of constant service, the pumps have never skipped a beat. Clayton Knable, Plant Superintendent, says, "We'll replace existing equipment with Marlows every time. They have given us no service problems since they have been installed."

If you have a petroleum handling problem, look to Marlow for your solution. Marlow builds the most complete line of petroleum pumps available anywhere for bulk plants, tank trucks and transports.

Write today for Bulletin PM-06 and the name of your nearest Marlow dealer.

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MARLOW PUMPS

DIVISION OF BELL & GOSSETT COMPANY

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AIR IS THE VILLAIN!

in hot water heating or chilled water cooling systems

MAID-O'-MIST *Automatic* AUTO-VENTS

CONTINUOUS VENTING ACTION
ENDS CIRCULATION WORRIES!

No. 7 AUTO-VENT®

No wonder Number 7 is a big favorite with both heating and air-conditioning experts! Fully automatic, this brass vent has a self-closing, float operated valve — all mounted on a removable bonnet for quick servicing. Small (4⅜" x 2¼" with ⅛" I.P. female connection) it does a big job of eliminating air. For pressure up to 75 lbs.

Float Type

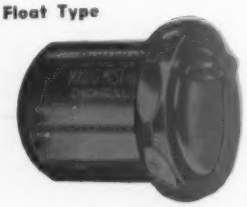
AUTO-VENT No. 67

Is t space limited. Then No. 67 is your Auto-Vent! Its overall sizes is only 3 3/16" x 1½" with ⅛" I.P. male connection. Takes 30 lb. pressure.

Float Type

No. 72 AUTO-VENT

A fast-venting valve of the expansion type for convectors, baseboard and free-standing radiation. For vertical or horizontal mounting. Size 1¼" x ½" with ⅜" I.P. male connection. Disc dries quickly because of immediate drainage.



No. 27 AUTO-VENT

Smaller sized (3" x 2½") for horizontal mounting with ⅛" I.P. female side connection. Use on convectors, radiant coils, etc. Takes up to 50 lb. pressure.

Float Type

No. 37 AUTO-VENT

Similar to No. 27, but designed for horizontal mounting with ⅛" I.P. vertical male bottom connection. Size 3" x 2½", 50 lb. pressure.

Get full information from your jobber or write for catalog, today!

Float Type

MAID-O-MIST Inc.

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD · CHICAGO 41, ILL.

Mutz, the next speaker, on the other hand said that technology and marketing are inseparable in electric heating. In any attempt to retard electric heat, we simply try to avoid becoming involved in the unknown. As we accept challenges we move forward—as we bypass them we move backward. We'll see vast improvements in the coming years in the variety and types of heating products in the market, such as in duct systems with room control. Heat pumps he finds very simple, getting typically 35,000 Btu from 5 kwh. New two and four speed compressors are coming, with higher Btu per kwh.

The final panelist, Green, as a wholesaler added electric heating to his li[illegible] years ago. He hasn't given it too much push, but definitely not backed away from it. He started figuring Btu then threw out this approach. He noted that Iowa State University has put together a 16mm color film on electric heating in cooperation with the utilities of the state. Then speaking as a wholesaler of warm air heating he emphasized the great need of national promotion by manufacturers, stressing the refinements for complete comfort, not just heat.

Whale Oil plans Expansion along Brooklyn Waterfront

A MULTI-MILLION DOLLAR expansion and development program along the Brooklyn waterfront has been announced by Whale Oil Co., Inc., Brooklyn, N. Y.

President Joseph J. Schwartz said that plans are to convert an area in excess of 500,000 sq. ft. along Upper New York Bay into a large oil tank farm. The site was acquired recently from Brooklyn Union Gas Co. and is adjacent to Whale's present headquarters. Expansion plans contemplate provision for more than 200 million gallons of fueloil.

Facilities now include docks to handle four large tankers at one time, a series of above and below ground storage tanks, oilburners and parts warehouses, powerplant, garage and repair shops, general offices and a railroad siding.

YOUR "DOOR OPENER" TO NEW ACCOUNTS & REPLACEMENT SALES . . . a perfect tie-in with your present business!

ONE MAN ALL-WEATHER, INDUSTRIAL — COMMERCIAL — RESIDENTIAL POWER CLEANING

The Kleen-Air "ONE MAN" Power Cleaner provides the fastest set-up time possible to complete 8 to 10 jobs daily. The unit is designed to work in crowded, congested areas where only one parking space is available.

In RAIN, SNOW, or SHINE you clean with Kleen-Air. There's POWER and CAPACITY for any job. Kleen-Air equipment is a perfect tie-in with your present business and a natural "Door Opener" to new customers and profits.

Kleen Air Power Cleaning

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215 NORTH MAIN STREET
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Please send literature on Kleen-Air Power Cleaners to

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•

Vacuum breaker feature available

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Aluminum body, bronze parts

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Rigid or flexible tubes

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All parts are completely interchangeable with parts of other "210" nozzles on the market

•

Order now from your Ever-Tite distributor, or write for details

EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N. Y.

Canadian oil heat Promotion is making some real Strides

THE OIL HEATING Association of Canada, with headquarters in Toronto has in the past few years distinguished itself quite often through activities such as the large bi-ennial heating show at the Exposition grounds, the strong local advertising campaign in Toronto and a couple more large eastern cities. Now it is stepping out with a considerably larger program for group advertising and general oil heat promotion.

We asked Arnold Rowe-Sleeman, the managing director, to fill in some details, so the facts expressed are from him.

Rowe-Sleeman

High spot of the effort is the granting of financial support from the central office to assist the local campaigns. These campaigns have been originated by, and are entirely conducted by, local fueloil distributors. The central office has received cash for a common pool from the nine major oil companies operating in eastern Canada. That's 100% coverage at that level.

A year ago the central treasury had on hand $22,500 for the matching job; now they have $50,000 and the director believes that by next spring they will be on a hundred thousand annual basis.

The support is provided to the local organizations at the rate of one-third of the total outlay for advertising media and preparation. The local oil men assess themselves at the rate of $200 per million gallons sold.

The domestic fueloil market from southern Manitoba to the eastern borders of Quebec, in cities of 5,000 or more population, is just above a billion gallons. Thus far, about 600 million gallons have been "organized" in 23 chapters as follows: Winnipeg, Port Arthur-Fort William, North Bay, Sudbury, Windsor, London, Norfolk County, Peel County, Niagara-St. Catherines, Hamilton, Brantford, Kitchener, Galt, Toronto, Os-

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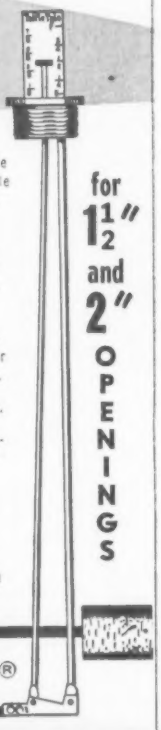
OIL TANK GAUGE

★ DESIGNED FOR PERFORMANCE
★ MANUFACTURED FOR QUALITY
★ PRICED FOR VOLUME SALES

Better 7 WAYS



1. An easy-to-read scale that is plainly visible in even the darkest places.
2. All-weather plastic top and guaranteed overall rugged construction.
3. Designed and engineered for inside or outside installation.
4. Heavy die-cast plug.
5. SPRING STEEL flexible float rod.
6. All moving parts hinged on durable BRASS pivots.
7. No maintenance, repair or regulation after installation.

for 1½" and 2" OPENINGS

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Stock this fast-selling gauge with many exclusive features not found in higher priced gauges.

WRITE TODAY FOR OUR LOW PRICES AND SAMPLE GAUGE

BUSINESS IS BETTER WHEN YOU DO BUSINESS WITH COASTAL

OIL COASTAL COMPANY

Now, More Than Ever, Coastal Does The Most For Fuel Oil Dealers

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EXECUTIVE OFFICES: 744 BROAD ST., NEWARK 2, N. J.

J. H. HACKER AND W. FELDMAN, PARTNERS OF CONSUMERS PETROLEUM CO., DETROIT, MICH., SAY:

"Our heating oil sales increased 35% in two years after switching to Texaco Fuel Chief. Selling Fuel Chief is easier, because home owners know the high quality of other Texaco products. Most important, Texaco gave us great help right from the start. We like to do business with Texaco." Sell the best . . . sell **TEXACO**

Consumers Petroleum Co. is one of the largest Distributors of petroleum products in Detroit. Overall sales of other Texaco products have increased, too, since they took on Texaco Fuel Chief.

5 reasons why it pays to be a Texaco Fuel Chief distributor

1. Texaco Fuel Chief is cleaner-burning.
2. Dependable and efficient delivery at all times.
3. Immediate acceptance. Fuel Chief is sold under the nationally famous trademark, the Texaco red star with the green "T".
4. One of the largest producers of heating oil, Texaco is the only petroleum company to build up successful distribution of its products nation-wide.
5. Profitable and proved sales policies.

A SOLID FUTURE is one of the advantages of being a Texaco Fuel Chief Distributor. There may be an opportunity for *you*. Investigate — send this coupon to Manager, Fuel Oil Sales Division, Texaco Inc., 135 E. 42nd St., New York 17, N. Y.

TEXACO FUEL CHIEF HEATING OIL

I would like complete information about the possibility of teaming up with Texaco as a Distributor of Fuel Chief Heating Oil.

NAME_____

STREET_____

CITY_____

STATE_____

hawa, Ottawa, Peterborough, Belleville, Kingston, Cornwall, Welland, Montreal and Nova Scotia.

Rowe-Sleeman points out that there are at least seven major eastern markets having gas rates identical with the rest of the country but where the advertising campaigns have been strong enough to measurably improve the competitive ratio of oil heat compared to the non-promoted or less supported markets. Good examples are Oshawa, Ottawa, Kingston, Cornwall and Montreal. He notes, "It would be easy to exaggerate, I suppose, but the results have been most impressive."

National Assn. of Sales Reps is Objective of N. Y. Group

FORMATION of a National Association of Plumbing & Heating Supply Representatives is the objective of a move by the Sales Representatives Association of New York which provides for non-resident members.

Marvin Leffler, president of the New York group, explains that the non-resident members will be encouraged to organize local Associations patterned after the New York chapter. Each local group then would elect two delegates to the national association, these delegates to act as a board of directors.

The non-resident membership is open to individuals, firms or corporations, located and doing business outside of the New York-New Jersey trade area, who have been in business for three years and have handled as a representative two or more lines.

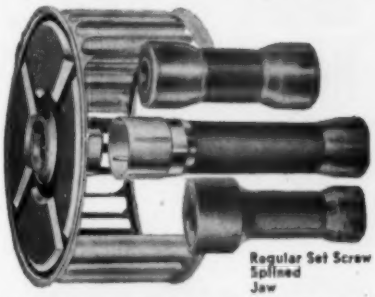
Dues for non-residents are $7.50 a year, and, while they will not have the right to vote on purely local matters, they will participate in an annual meeting to vote upon resolutions affecting non-resident members as a national entity. Also they will become members of the National Council of Salesmen's Organizations through their affiliation with Sales Representatives Association.

Applications from qualified representatives can be sent to Marvin Leffler, Sales Representatives Association, 9-17—37th Ave., Long Island City 1, N. Y.

QUALITY is our business .. without *any* compromise

AND ONLY Guardian GIVES YOU ALL THREE—

1. FLEXIBLE COUPLINGS



Regular Set Screw Splined Jaw

Only Guardian gives you these features—

- ROLL SPINNING—Exclusive process joins all three components at one time—while in final operating alignment.
- BRAIDED RUBBER—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- ONE-PIECE DESIGN—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

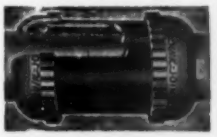
2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT



Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

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RAPID-TITE
Fuel Oil Delivery System

. . . you can reduce delivery costs as much as 20%. We'll prove it to you with your equipment at your office. Ask our field service man or send coupon below.

PHILLY'S first for modern fuel oil delivery

- **One Nozzle Connector fits all fills.**
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City _____ State _____

United hydronics Industry aims at expanded Markets

A "UNITED INDUSTRY" concept was reported at the December 9 meeting of the Better Heating-Cooling Council, New York 17, N. Y.

Retiring Council President Marvin Mitchell, Weil-McLain Co., told the meeting that he expects the united effort will enable hydronics to expand its markets effectively and coordinate the industry's promotional drive at all levels.

He pointed to BHC's recent expansion, including reorganization into two divisions, one to conduct residential promotion programs, the other to cover commercial-industrial applications. He said that the growth in local Councils and the recent action of the Mechanical Contractors and Plumbing Contractors national associations in joining the national BHC were further indications of the new united effort behind industry hydronic promotion.

Franklin Greene, executive director, announced at the meeting the formation of the Puget Sound Better Heating-Cooling Council, with Ted Koran, president; James Eustace, executive vice-president; Andy Kelly, vice-president and Archie Arnold, National-U. S. Radiator, secretary. The Puget Sound Council covers Seattle and Tacoma territories, brings to six the number now organized. These will be augmented soon by Councils forming in Detroit and Baltimore.

Greene reported that BHC's budget for hydronic promotion for 1960 will be the largest in its history.

Henry M. Gibb, Pacific Steel Boiler Div., outlined the objectives and operations of the Council's commercial-industrial program, which is financed and under way. He is chairman of the C & I committee.

Michael J. Murray, Plans Board Chairman, moderated a session on the Council's 1959 operations and its plans for 1960.

Alvin Buschel, chairman of the Marketing Task Force of the Plans Board, included in his report an outline for a proposed hydronics consumer advertising program, which, as contemplated, would be a special ad campaign supplemented by member

BIG FILTER AREA
CONSTANT POWER
CONTAINER CAPACITY

WITH

SOOTMASTER

MODEL 581

The engineering principles incorporated in the SOOTMASTER Model 581 feature a larger filter area designed for lasting suction and maximum filtration. These, combined with Mastercraft disposable paper filter bags, provide a double filter action that prevents soot leakage, eliminates costly dust bag failures and insures longer motor life. New power cooling diffused exhaust design eliminates annoying exhaust blast and quietly distributes escaping air in all directions without disturbing the dust accumulation found on boiler room walls and rafters.
Lightweight and three convenient carrying handles make this machine easy to carry and easier to empty with the aid of the Throw-away Bag. The cannister is protected by a new dollie assembly that not only acts as a mount for four swivel casters but also is encased in a rubber bumper that protects walls and objects from being marred. —

LITERATURE ON REQUEST

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WEST HAVERSTRAW NEW YORK
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IMPERIAL REFRACTORIES AND EQUIPMENT LTD.
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JOBBER DISTRIBUTOR ENQUIRIES INVITED

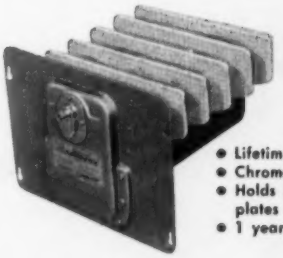
HOW TO **WIN** CUSTOMERS AND **INFLUENCE** PROFITS!

GENERAL HUMIDIFIER puts moisture in . . .
GENERAL FILTER takes harmful dirt out

Picture *your* customers in this happy setting . . . you've just installed a trouble-free GENERAL HUMIDIFIER and a dependable GENERAL FUEL OIL FILTER in the heating system. Typical dealer profit? About $15.00!

Sell your customers this double heating protection: a comfortable, *healthy* home thanks to increased humidity; steady, dependable heat that gives maximum efficiency, saves on fuel bills, ends middle-of-the-night callbacks for you!

YOUR SALES MARKET IS HUGE! Fewer than *one warm air furnace in five* has a humidifier. Millions are without a filter —or dirt-clogged cartridges are changed only infrequently. Every time you check a heating system, look for these easy sales!



Model 800
"Moisture-Matic"

- No float to stick or clog
- Corrosion-proof *molded* pan
- Lifetime neoprene diaphragm
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- Holds up to 15 "Porous Weave" plates
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General Filter

- Lifetime cast iron and steel construction protected with rust-resistant plastic coating
- Wool felt cartridges—trap moisture, dirt, lint; prevent nozzle clogging
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HEALTHFUL HOMES are GENERAL-humidified . . . GENERAL-filtered

Member of the Humidifier Association

GF PRODUCTS **GENERAL FILTERS, Inc.** 43800 GRAND RIVER AVE. NOVI, MICHIGAN

IN CANADA: Canadian General Filters, Ltd., 39 Crockford Blvd., Scarborough, Ontario

Service Success is no accident!

Smart service men don't wait for customer complaints. They avoid costly and time consuming "call backs" by always carrying the complete line of Tankit products in their kits. Successful service starts with "Tankit Time Savers"!

NEUTRODA

Powder and Spray

- Banishes odors from spills and leaks quickly and effectively!
- Largest selling fuel oil neutralizer in the world!

MAGNE PATCH

- Powerful magnetic emergency tool
- Stops oil tank leaks in seconds
- Withstands tank vibrations • re-usable

TANKTEX

Water Finder Paste

- Comes in new unbreakable plastic jar.

TANKIT

Standard and Giant

- A mechanical strap-on-device to stop fuel oil tank leaks. Lasts for years!

ALL TANKIT PRODUCTS AVAILABLE AT YOUR JOBBER

Or write for complete information.

THE TANKIT CO., INC.
560 BELMONT AVENUE
NEWARK, NEW JERSEY

company participation. The committee has drawn up six suggestions for small advertisements to run in shelter, builder and trade magazines.

Frank Brophy, chairman, Editorial Conference and Publicity Task Force, revealed preliminary plans for a one-day trip for shelter magazine editors to the Institute of Boiler & Radiator Manufacturers Research Residence at Urbana, Ill. in February. He also described the impressive publicity and communications program undertaken during 1959.

M. M. Brooks, chairman, Builder Program Task Force, displayed and described the function of a kit prepared to help builders sell homes faster with hydronics. Material in the kit includes a handbook for builders' salesmen, publicity copy for the builder, interior and exterior signs.

Joseph Balter, Housing Congress Task Force chairman, reported on recent sessions in Washington. He reported that a high majority of delegates to the Congress reported satisfaction with hydronic heating. At the same time 75% of all the delegates said they felt it important to have detailed information about its heating system before they could make up their minds about purchasing a home.

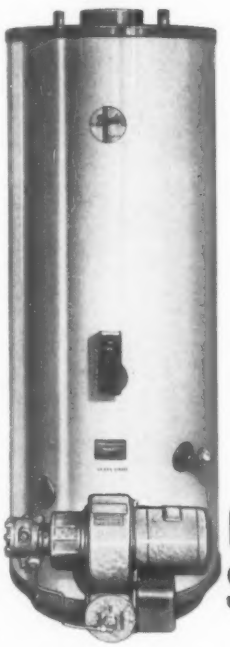
Final report of Plans Board chairmen came from Gordon J. Andrew who talked about Wholesaler Co-op Programs. In a preliminary report of a survey conducted by his Task Force, Andrew revealed that only a limited number of wholesalers have heating departments. He added that there exists a real need for the wholesaler to promote hydronic heating at the local level, but he viewed this as a long-range, detailed group activity.

E. J. Ford concluded the program with a report on local Better Heating-Cooling Council operations.

❖

John C. Taggart has been named manager of distributor sales, Sun Oil Co., Philadelphia. He will coordinate all of the company's wholesale distributor activities. Succeeding him as manager of the Marcus Hook, Pa., sales district is *Richard H. Sterling*, formerly manager, retail sales, Middle Atlantic region.

Glass Lined OIL WATER HEATERS



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• A size to meet every requirement. Uses pressure burner, number 2 oil and sells at popular prices. Has every feature for volume sales.
Made in large commercial sizes for schools, hotels, hospitals and public buildings. Approved for 180 degree outlet water.
Details on request.

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YOU'LL LEAD THE PARADE... IN THE NEW DECADE!

WITH Luxaire®

FIRST IN HEATING!
FIRST IN COOLING!
FIRST IN PROFITS
FOR THE 1960's!

Over the years, Luxaire has led with volume sales of units that excell – with heavy construction, uncomplicated design and trouble-free performance – always at a competitive price!

For 1960, more and better Luxaire Units will expand your opportunities in Summer as in Winter Air Conditioning!

New 2 and 4 H.P. Air Cooled Luxaire Condenser-Compressor Units – added to present 3 and 5 H.P. sizes – bring you revolutionary new features for quiet operation, peak performance and outdoor installation!

New Luxaire Gas Fired Horizontal Furnaces are low and compact with increased air handling capacities. New 175,000 and 200,000 Btu Gas Winter A.C. Units provide these high capacities in one, compact assembled and wired package!

New Luxaire Oil Winter A.C. Units combine a round combustion chamber with a factory-installed refractory firebox. In the new Horizontal and Basement models, these furnaces have increased heating and air handling capacities all along the line!

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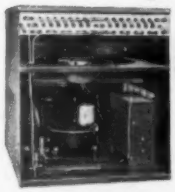
NEW SUMMER AIR CONDITIONING UNITS



New! 2 or 4 H.P. Air Cooled Condenser-Compressor Unit—Low Velocity Upward Discharge—Also, 3 and 5 H.P. Units

Air Handling Blower-Coil Unit

Advanced, Round Plenum Cooling Coil

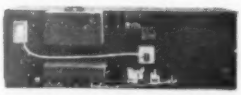
Duct Cooling Coil

Counterflow Cooling Coil

NEW GAS A.C. UNITS

Complete Line—Upflow 75,000 to 200,000 Btu—Counterflow: 75,000 to 150,000 Btu

New! 175,000 or 200,000 Btu—A Single, Compact Package



New! Low and Compact Horizontal Furnaces. 4 Sizes: 80,000, 100,000, 120,000, 140,000 Btu

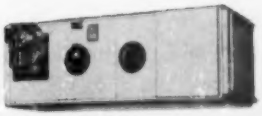
NEW OIL A.C. UNITS

New! Assembled and Wired A.C. Units—84,000 - 119,000 Btu

With Vestibule and Hinged Door

With Exposed Burner

New! Slender and Compact Horizontal Units—4 Sizes: 89,600, 106,400, 123,200 and 224,000 Btu



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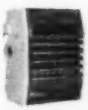
Combination Year 'Round A.C. Units



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HEATING & AIR CONDITIONING UNITS

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SPECIFY

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ROTARY PUMPS

FOR

TANK TRUCKS
TRANSPORTS
BULK TRANSFER

40-300 GPM • PRESSURE TO 100 PSI

Furnished in hi- and lo-drive design — 40-300 GPM sizes, pressures to 100 PSI. A rotary unit, with accurately machined alloy iron gears . . . heavy duty bronze bearings . . . hardened steel drive shaft . . . with mechanical seal — (packed box, if desired). Adjustable relief valve is standard. Bulk plant units on bedplate, with or ready to receive motor, are also made by Roper.

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Commerce, Georgia

Letter to the Editor

LANGIE FUEL SERVICE, INC.
Rochester 4, N. Y.

Editor:

It was William Shakespeare, that great student of men and scholar of human affairs who once wrote:

"On such a full sea we are now afloat
And we must take the current when it serves
Or lose our ventures."

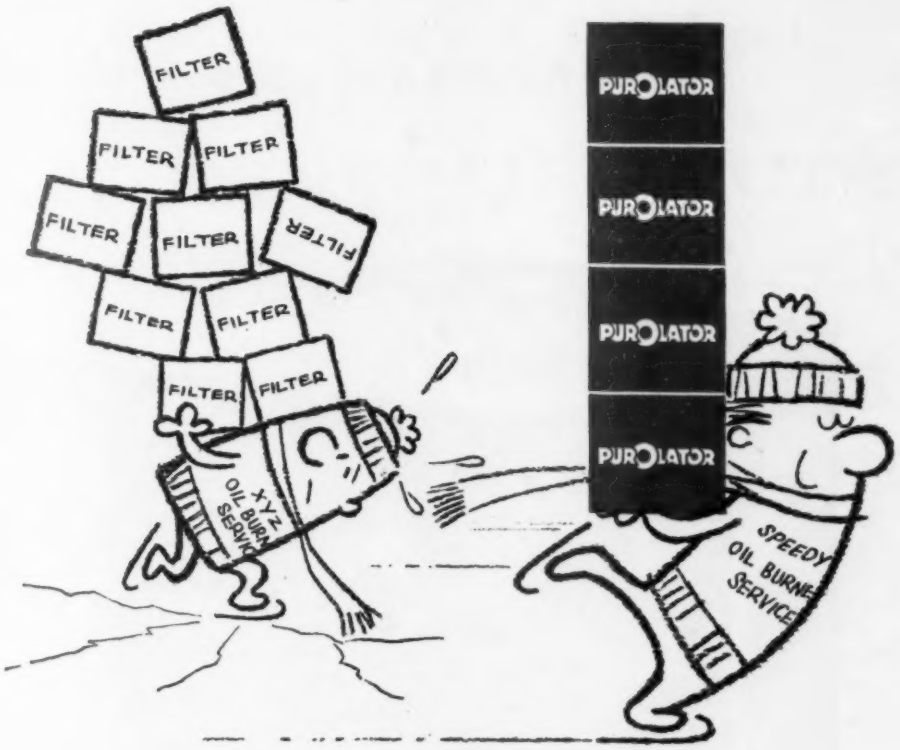
It seems that such lines quite aptly describe the situation in which the fueloil industry finds itself. While the National Fueloil Council program is certainly constructive and most encouraging, it seems to me that the program must be broadened considerably if the heating oil industry is not to suffer serious or additional losses.

In addition to consolidation of associations within the industry and research in the direction of improved and less costly oilfired equipment, there should now be developed a broad industry program around which all in the industry might rally.

Accordingly I am listing a ten point program which if adopted, I believe, would be most effective not only in holding our present gallonage, but possibly in regaining some which we already have lost.

1. Improve the public image of heating oil by making it burn more cleanly. This could be accomplished by means of new and improved additives which would make it possible to have oil burn without leaving soot and carbon on boiler flues and radiator surfaces.
2. Improve the public image of heating oil by neutralizing its present odor.
3. Improve the public image of heating oil by making its physical appearance more attractive; i.e., making the color closer to white than the present yellow or brown. White stands for cleanliness.

(*Please turn to page* 130)



Carry only 4 Purolator filter refills for 98% of all filter replacements

And now is the time to protect every oil burner with a Purolator filter . . . protect yourself from emergency calls now

The fact that 4 Purolator Oil Burner filter refills take care of 98% of your oil burner installations is exactly half the story. There's also this: *now* is the time to check the filter on every burner you service. Why? Because oil burners have been working overtime during the cold weather—and that means oil is used up much faster and replaced more often. More sediment picked up in transport gets into the tank and begins to move towards the burner. Dirt-clogged nozzles account for most burner failures—but you can stop *all* dirt, even as small as .0005 of an inch, with a Purolator filter. It actually has 5 times the dirt retention and flow capacity of the biggest competitive units. Give them that kind of protection now (it lasts at least a year without servicing) and you'll take it easy throughout the winter—free from the usual emergency calls.

And here's another help on your job—a cross reference chart worked out by Purolator which shows you which refills will fit all popular makes of filters. It's yours for the asking. Just fill in and mail the coupon.

TO: PUROLATOR PRODUCTS, INC.
RAHWAY, N. J.

Please send me your oil burner filter cross reference chart.

*Name*_____

*Title*_____

*Company*_____

*Street*_____

*City*_____ *Zone*____ *State*_____

Filtration For Every Known Fluid

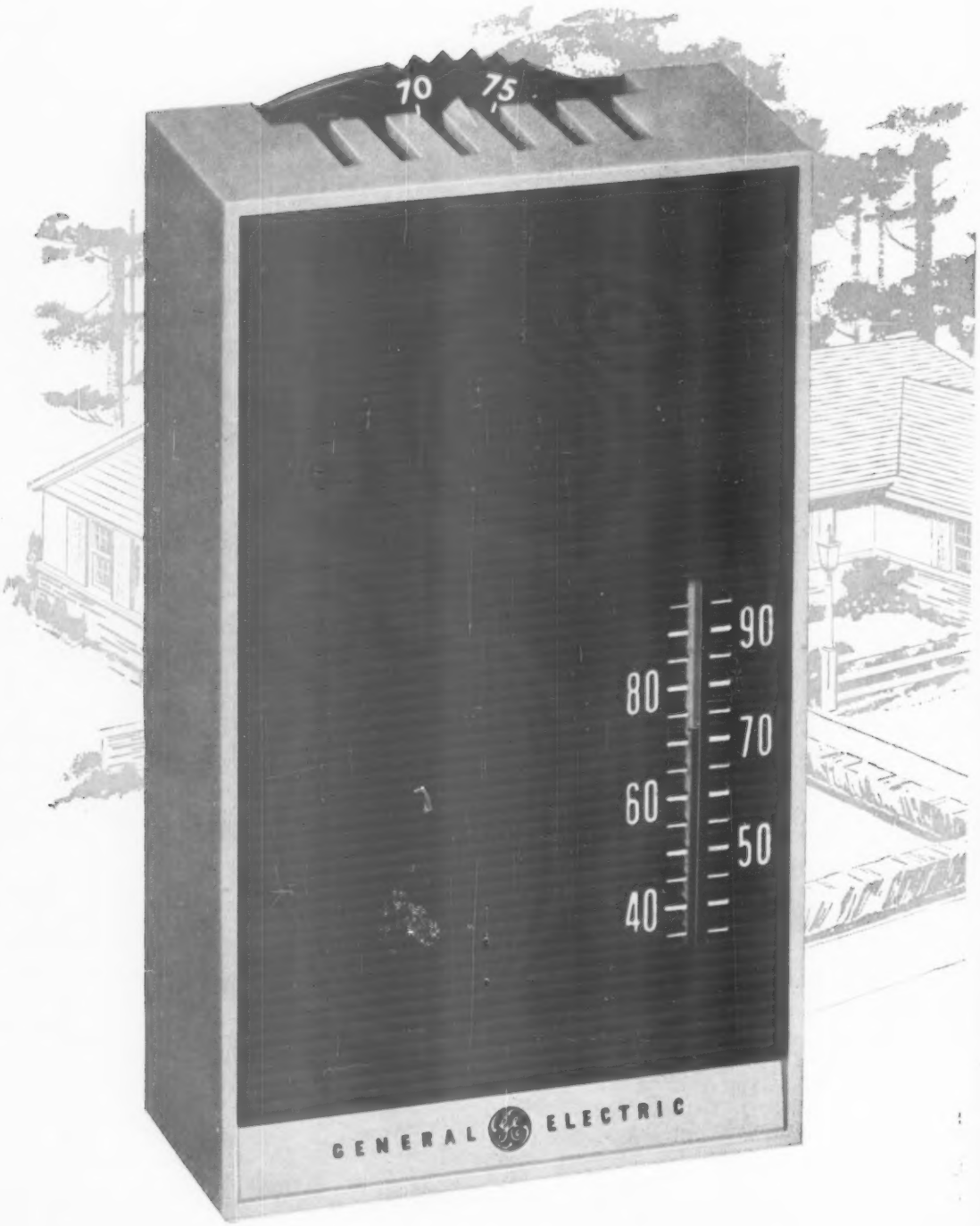
PUROLATOR

PRODUCTS, INC.

RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

fuel oil & oil heat

designed to complement



the décor of every home . . .

GENERAL ELECTRIC'S NEWEST STRAIGHT-LINE THERMOSTAT

Here's a brand-new straight-line thermostat from General Electric. Its clean good looks and modern appearance match its proved, engineered accuracy. And what does this mean to you and your customers?

It means solid comfort conditioning. This new, precision-engineered instrument provides accurate control for today's heating systems . . . at the touch of a fingertip. Just a touch on the smart adjusting dial sets the temperature that means desired heating comfort.

It means sure, positive control. Because of its positive, snap-action mechanism, the new G-E thermostat provides maximum resistance to household vibrations; and it needs no leveling. And, of course, it's easy to install. Its sub-base goes on the wall with only two screws; and only two wire connections are needed.

For more information:
OEM's: contact your nearby G-E Apparatus Sales Office for application engineering service.
Dealers: contact your local distributor of G-E heating controls.
Or write to Section 740-142, General Electric, Schenectady 5, N. Y.

APPLIANCE CONTROL DEPARTMENT

GENERAL ELECTRIC

...right down the line.....

U.S.-CARLIN pays off in PROFITS!

Any – and every – U.S.-Carlin Oil Burner you sell means dollars in your pocket. Outstanding quality features, consistently dependable performance, proved customer acceptance, and the unqualified backing of one of the best-known names in oil burners are the money-making reasons why you will find it pays to "line up with the line of advanced design." Ask your heating wholesaler today for full particulars.

CONDENSED SPECIFICATIONS

MOTOR – Long-hour duty with safety overload control. Complies with *NEMA* mounting specifications. 1/8 hp. (Models 400, 150F, 400S, 150SF-2, 500S-35); 1/6 hp. (Models 650, 700S-35, 800S-4); 1/4 hp. (Model 1200; 1/3 hp. (Models 2000S-5, 2000).

TRANSFORMER – Shielded to block radio and TV interference. 10,000 volt (12,000 volt on Models 2000S-5, 1200, 2000).

AIR TUBE – Steel with heat resistant air cone.

FAN – Precision balanced. Mounted directly on motor shaft.

NOZZLE – Stainless steel alloy. Hollow cone spray (Hollow cone or solid spray on Models 1200, 2000). Dual nozzles on Models 500S-35, 650, 700S-35, 800S-4, 2000S-5, 1200, 2000.

FUEL UNIT – Single-stage standard on Models 400, 150F, 400S, 150SF-2, 500S-35, 650. Two-stage on Models 700S-35, 800S-4, 2000S-5, 1200, 2000. Built-in strainer and pressure regulating valve. Capacity of strainer equals or exceeds maximum firing rate of burner.

SOLENOID VALVE – Combination delayed-opening and instantaneous cut-off oil valve standard on all "S" models, also 1200, 2000.

COMBUSTION HEAD – Models 150F, 400, and 650 have standard head with diffuser vanes formed at a fixed angle to establish air pattern. Model 150F (0.65 to 1.35 gph capacity) and Model 400 (0.65 to 1.00 gph capacity) have a series of adjustable openings in center of diffuser for regulating air delivery to shape the fire. All "S" Models have "Shell Head" and finned collar for efficient mixture of air with oil. Models 1200, 2000 have High Temperature Combustion Head with finned collar for greater firing rate (Model 2000) and narrower fire.

ELECTRODES – Nichrome steel with full-glazed porcelain insulators counterbored for utmost safety. Flared, "Wide-arc" design permits heavier spark and assures positive protection during low voltage periods.

BUS BARS – Rigid heavy-gage brass (Models 400, 400S, 500S-35, 700S-35, 800S-4); phosphor bronze (Models 150F and 150SF-2); high tension leads (Models 650, 2000S-5, 1200, 2000).

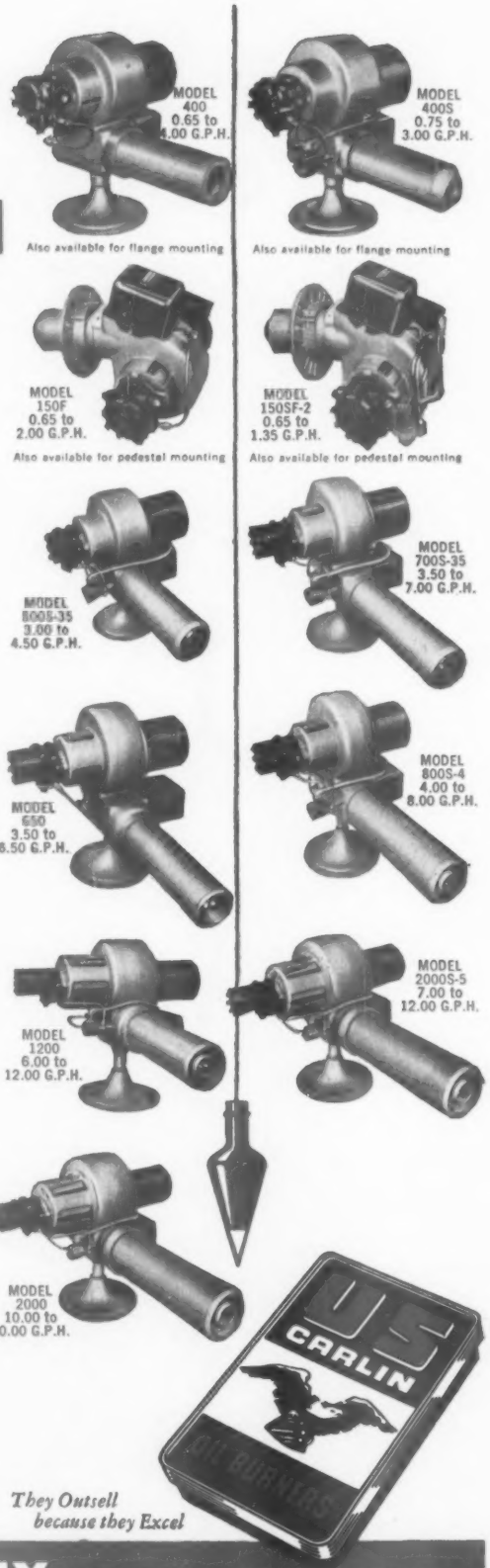
HOUSING – Cast iron. Designed to assure efficient air delivery and quiet operation. Machined to rigid standards.

COUPLING – Universal type with neoprene center piece. (Flexible type on Models 2000S-5, 1200, 2000).

CONTROLS – Thermostat, Limit Control, and Stack Relay. Electronic Control set in place of Stack Relay on Models 800S-4, 2000S-5, 1200 and 2000.

ELECTRICAL CHARACTERISTICS – 115V-60 cycle. 1725 rpm. All models except 150F and 150SF-2 available with 230V-60 cycle on special order. Also a complete line of 110 and 220V-50 cycle models with capacities from 0.50 to 15.00 gph.

U.S.-Carlin Oil Burners are listed by Underwriters' Laboratories, Inc. and are approved under U. S. Government Commercial Standard CS75-56 where applicable.


MODEL 400 0.65 to 4.00 G.P.H.
Also available for flange mounting
MODEL 400S 0.75 to 3.00 G.P.H.
Also available for flange mounting
MODEL 150F 0.65 to 2.00 G.P.H.
Also available for pedestal mounting
MODEL 150SF-2 0.65 to 1.35 G.P.H.
Also available for pedestal mounting
MODEL 500S-35 3.00 to 4.50 G.P.H.
MODEL 700S-35 3.50 to 7.00 G.P.H.
MODEL 650 3.50 to 6.50 G.P.H.
MODEL 800S-4 4.00 to 8.00 G.P.H.
MODEL 1200 6.00 to 12.00 G.P.H.
MODEL 2000S-5 7.00 to 12.00 G.P.H.
MODEL 2000 10.00 to 20.00 G.P.H.
U.S. CARLIN
OIL BURNERS

They Outsell because they Excel

THE CARLIN COMPANY • WETHERSFIELD, CONN.

MID-WEST REPRESENTATION — COMPLETE BURNER STOCKS AT CHICAGO

Oilheating Sales up 12%

Installations in 1959 amounted to 637,057 Burners and Units

OILBURNERS AND UNITS sold in 1959 for central heating registered a gratifying 12% gain to achieve a total of 637,057, compared with a revised total of 568,318 during 1958. This reversed a downward trend during the previous two years.

The sales total achieved in 1959 proved to be better than 1958, but 11% below the last ten-year average of 716,671 installations and 7.3% below the postwar average (1946 through 1959) of 686,953.

Total sales of automatic heating—oilburners, stokers and gas burners—all were up in 1959. Aggregate sales totaled 1,986,252, divided: Oilburners, 637,057, an increase of 12%; Stokers, 12,200, up 0.8% and Gas burners, 1,336,995, 15% greater than 1958 sales.

Automatic heating in operation at the end of 1959 is estimated to have gone up by 6.7% to a new all-time high of 22,139,559, compared with a revised total of 20,742,043 at the end of 1958.

The breakdown lists automatic heating systems in use, with comparative percents for previous years:

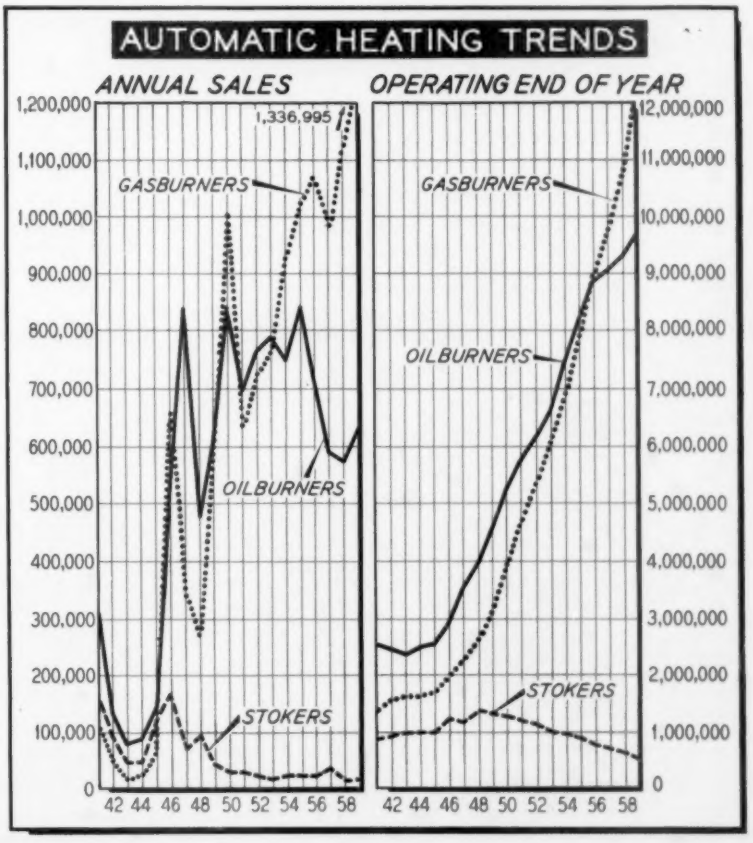
Operating 12/31/59		*1959*	*1958*	*1957*
9,647,590	Oilburners	43.6	45.0	46
11,943,826	Gas Burners	53.9	52.1	50
548,143	Stokers	2.5	2.9	4
22,139,559				

Joining this group as a comparatively new and growing competitor is electric heat, with an estimated 591,700 homes now completely heated with electricity, as of September 1, 1959. Figures compiled for previous

TABLE 1
Automatic Heating Trends

	Total	% of Total Stoker	Oil-burners	Gas-burners
	ANNUAL SALES			
1941	652,591	28.0%	51.1%	20.9%
1942	225,041	35.1	44.2	20.6
1943	64,465	27.5	51.9	20.6
1944	102,028	31.0	48.9	20.1
1945	321,693	37.1	45.2	17.7
1946	1,336,316	13.5	37.0	49.5
1947	1,271,679	4.9	69.8	25.3
1948	803,222	9.5	56.7	33.8
1949	1,281,706	2.3	47.9	49.7
1950	1,210,725	1.1	45.6	53.3
1951	1,346,794	1.4	50.1	48.5
1952	1,544,160	1.2	50.4	48.4
1953	1,636,812	0.8	50.3	48.9
1954	1,698,459	0.8	43.4	55.7
1955	1,974,282	0.7	41.0	58.3
1956	1,809,508	0.8	39.2	60.0
1957	1,579,088	0.8	36.7	62.5
1958*	1,739,865	0.7	32.7	66.6
1959	1,986,252	0.6	32.1	67.3
	OPERATING AT END OF YEAR			
1941	4,514,627	17.8%	53.2%	29.0%
1942	4,615,785	19.0	51.7	29.3
1943	4,633,755	19.3	51.3	29.4
1944	4,700,130	19.7	50.9	29.4
1945	4,979,775	20.7	50.5	28.8
1946	6,009,347	19.3	47.0	33.7
1947	7,133,709	16.6	51.2	32.2
1948	7,752,498	16.0	51.3	32.7
1949	8,845,695	14.0	50.8	35.2
1950	10,434,971	11.3	49.6	39.1
1951	11,506,701	9.8	49.6	40.6
1952	12,757,700	8.5	49.7	41.8
1953	14,085,664	7.1	49.8	43.1
1954	15,423,130	5.8	49.2	45.0
1955	17,047,244	4.6	48.5	46.9
1956	18,452,422	4.0	47.3	48.7
1957	19,516,099	3.5	46.3	50.2
1958*	20,742,043	2.9	45.0	52.1
1959	22,139,559	2.5	43.6	53.9

*Revised



years indicate this total has grown from 301,257 on September 1, 1956 to 372,219 the following year and 500,143 on September 1, 1958.

Domestic burners and units used in 1959 oilheating installations appear in TABLE 2, with comparative data for previous years. On December 31, 1959 oilburners for central heating in use had grown to an estimated total of 9,647,590. This was an increase of 3.4%, representing a net gain of 322,663 or 50.6% of total sales. At year end 1958 there had been 9,324,927 burners and units operating.

To arrive at a net gain in users during 1959, we deducted from the 637,057 sales a figure of 205,132 (32.2% of sales) representing oilburners and units installed to replace existing oilheating jobs. This resulted in a total during 1959 of 431,925 new oilheating customers. Then losses to other fuels—oilheating estimated to have been removed and replaced with heating equipment using other fuels—was deducted. This resulted in a net gain of 322,663 oilheating installations operating at the end of 1959.

Average retail and factory prices of conversion (or separate) oilburners reported during 1959 showed a slight drop from 1958 levels, whereas the same prices for boiler-burner and furnace - burner units registered increases. Separate burners sold at retail for $360 a 7% drop from the $387 reported for 1958. Boiler-burner units at retail sold for $802, a 4.4% jump over 1958 prices and furnace-burner units were installed for homeowners at a cost of $611, an increase of 1.6% during the year.

Prices dealers paid for the equipment followed the same general pattern. For instance dealers paid wholesale (factory) prices of $99 for a conversion or separate oilburner, down 3.9% from the $103 reported the previous year.

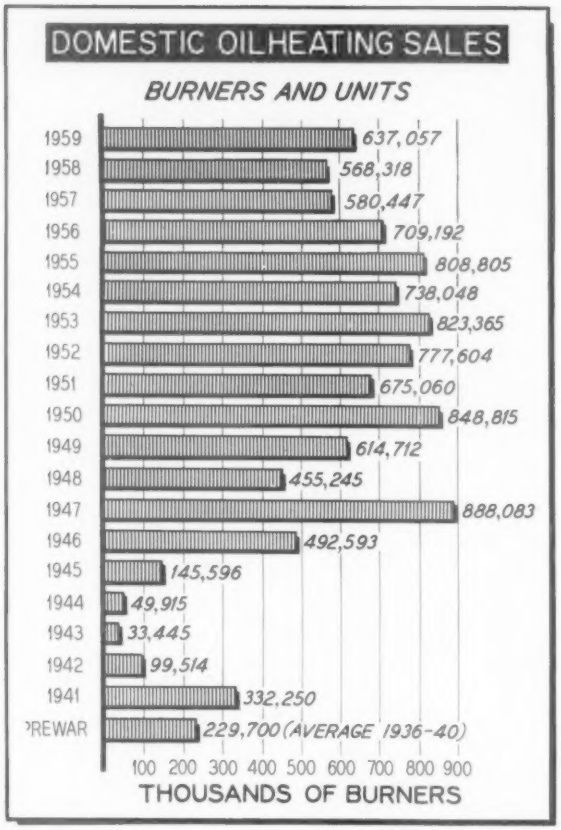


TABLE 2

Total Domestic Burners and Units

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	.....	.....	1930	648,500
104,000	.....	.....	1931	747,300
89,200	.....	.....	1932	831,120
88,600	.....	.....	1933	914,280
108,290	.....	.....	1934	1,012,870
150,510	$55,342,500	.....	1935	1,152,125
220,075	74,054,700	.....	1936	1,340,675
210,740	69,265,100	$22,238,200	1937	1,530,545
179,360	54,583,900	18,292,900	1938	1,667,745
236,140	66,520,400	23,352,200	1939	1,862,330
302,210	89,548,800	32,273,600	1940	2,135,125
333,250	113,546,400	41,931,800	1941	2,402,060
99,514	29,871,600	14,067,900	1942	2,386,290
33,445	5,283,300	5,431,000	1943	2,375,455
49,915	17,988,300	7,652,000	1944	2,392,265
145,596	49,245,200	17,845,400	1945	2,517,055
492,593	211,448,000	79,007,100	1946	2,821,044
888,083	418,178,500	156,759,900	1947	3,650,514
455,245	237,385,500	84,114,100	1948	3,975,773
614,712	262,843,600	102,660,700	1949	4,490,535
846,815	371,585,000	140,582,300	1950	5,172,134
675,060	330,610,900	123,630,800	1951	5,704,556
777,604	364,500,000	145,487,000	1952	6,345,876
823,365	428,600,000	204,289,000	1953	7,017,609
738,048	429,132,000	185,826,000	1954	7,581,973
808,805	458,237,000	205,073,000	1955	8,255,228
709,192	414,161,000	184,950,000	1956	8,732,445
580,447	318,259,000	145,797,000	1957	9,028,284
568,318	324,589,400	142,863,900	1958*	9,324,927
637,057	377,634,600	170,692,000	1959	9,647,590

*Revised

Wholesale prices the dealers paid for boiler-burner units jumped $2 to $397, an 0.5% increase and furnace-burner units sold to the dealer for $290 on the average, up 4.7% from 1958.

Types of oilburners sold during 1959 followed typical patterns with high pressure gun type burners continuing the most popular in accounting for 84.9% of 1959 sales, a slight drop from 85.4% the year before. Low pressure burners, the next in importance, remained exactly the same at 10.5%; wall flame or vertical rotary burners accounted for 3.2% of 1959 sales a slight increase over an even 3% in 1958. Vaporizing oilburners—including only those installed for central heating—went up a little bit in accounting for 1.4% of 1959 oilheating sales, compared with 1.1% in 1958.

1959			*1958*	*Prewar*
No.	*%*		*%*	*Avg. %**
540,861	84.9	High pres.	85.4	71.7
66,891	10.5	Low pres.	10.5	6.2
20,386	3.2	Rotary	3.0	11.0
8,919	1.4	Vaporizing	1.1	10.8
637,057				

*—Includes 0.3% miscellaneous.

TABLE 3

Domestic Conversion Oilburners

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
126,400	$79,400,000	$24,648,000	1930	648,500
104,000	50,310,000	16,640,000	1931	747,300
86,200	36,911,000	12,068,000	1932	827,320
80,800	31,263,000	10,423,000	1933	902,680
98,990	33,116,000	11,681,000	1934	991,980
136,825	43,373,500	13,408,900	1935	1,115,125
197,430	59,229,000	18,558,400	1936	1,281,305
184,920	54,181,600	15,903,100	1937	1,446,295
153,850	40,462,600	12,154,200	1938	1,559,675
200,020	48,004,800	15,601,600	1939	1,719,940
238,845	55,645,900	18,152,200	1940	1,933,605
237,965	59,490,200	19,275,200	1941	2,113,160
71,658	16,552,700	6,090,900	1942	2,073,260
21,363	1,885,800	1,837,200	1943	2,060,465
37,885	10,607,800	4,184,600	1944	2,072,445
119,680	34,292,200	11,249,900	1945	2,173,910
408,861	151,258,100	48,625,800	1946	2,397,554
669,615	262,489,000	83,701,900	1947	3,020,741
312,170	131,735,700	36,523,900	1948	3,208,365
440,748	155,143,300	47,160,000	1949	3,568,024
608,013	214,020,600	65,665,400	1950	4,057,412
477,267	189,475,000	55,363,000	1951	4,433,834
542,768	203,538,000	64,047,000	1952	4,881,476
382,042	140,591,000	42,789,000	1953	5,193,160
250,936	96,360,000	24,843,000	1954	5,366,444
241,024	91,107,000	22,415,000	1955	5,609,194
170,206	61,785,000	16,680,000	1956	5,723,726
150,916	53,877,000	14,488,000	1957	5,800,644
176,178	68,180,900	18,146,300	1958*	5,892,603
152,894	55,041,800	15,145,400	1959	5,970,042

*Revised

Estimates of conversion oilburners in recent years have been based principally on what type of installations dealers tell us they make. The "No. in Use" figure may be high since quite a few burners originally installed as conversions have been replaced with oil-fired units.

Average retail prices reported during 1959 for installations using the different types of oilburners changed very little from those of the previous year. For example, dealers installed high pressure gun burner jobs in 1959 for $356, a drop of 4.1% from the $371 reported in 1958. For those installations using low pressure oilburners dealers charged $426 in 1959, up from $407 or an increase of 4.7%. Finally, oilheating installed with vertical rotary type burners cost homeowners $476 in 1959, the same price as reported in 1958.

Average factory prices for this same equipment were reported as follows: High pressure gun type burners $99, a drop of 3.9% from the $103 price reported in 1958; low pressure burners cost dealers $160 in 1959 and $153 in 1958, a plus of 4.6%; vertical rotary type burners averaged the same in both years, $163.

Retail and wholesale prices compared in the table are weighted national averages.

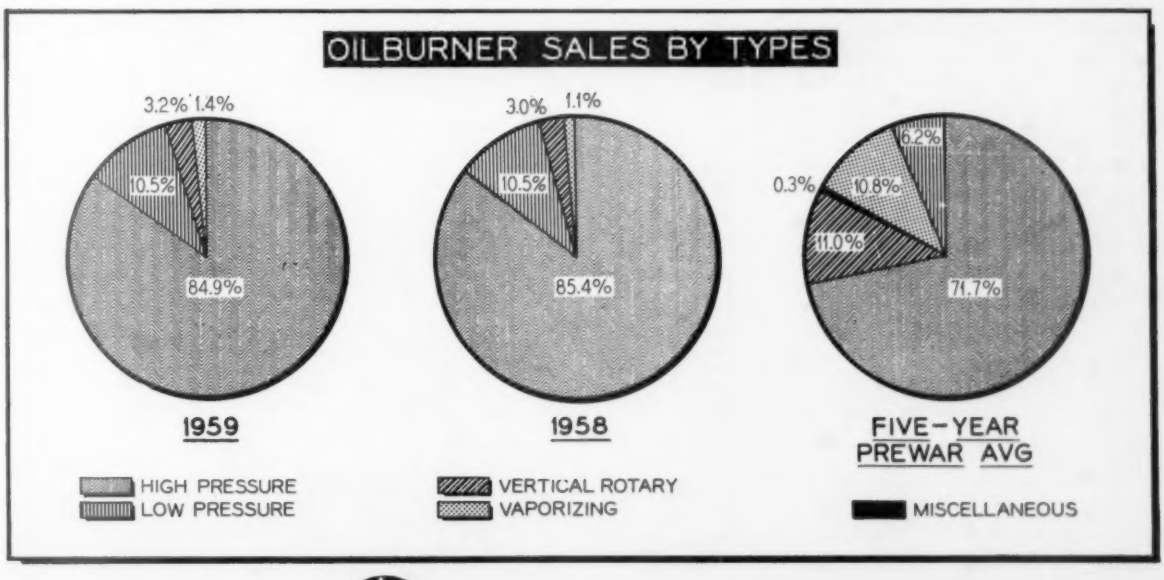
Retail			*Wholesale*	
1959	*1958*		*1959*	*1958*
$356	$371	High pres.	99	103
426	407	Low. pres.	160	153
476	476	Vert. Rot.	163	163

Oilburner installations made during 1959 to convert a heating system to oilfiring from another fuel amounted to a total of 219,148, representing 34.4% of all oilheating sales. This compares with a revised total of 208,281 in 1958, when conversions accounted for 36.8% of all jobs.

New homes installations at 212,777 took 33.4% of burners and units sold in 1959, a slight increase precentagewise over 1958 activity when new homes took an even 33% of burners sold, or 186,385 jobs.

Oilburners installed to replace worn out or obsolete oilheating equipment went up to 32.2% of all 1959 jobs, registering the highest percent of sales ever recorded by this type of sale. Replacement oilburners and units in 1959 totaled 205,132, compared to 173,652, or 30.5% of 1958 oilheating jobs.

About 2% of the 637,057 oilburner installations in 1959 were used to re-



Losses to other Fuels

	LOST TO		
	Gas	Coal	Electricity
New England	6,943	114	136
Metro. N. Y.	6,127	27	..
Other Mid-Atl.	14,877	635	165
South Atlantic	3,197	329	1,754
Midwest	58,526	424	3,900
Pacific N. W.	6,305	28	5,775
ALL U. S.	95,975	1,557	11,730

Losses to all fuels

109,262 or 1.2% of total operating 1959
98,023 or 1.1% of total operating, 1958
133,352 or 1.5% of total operating, 1957
90,137 or 1.1% of total operating, 1956
75,067 or 1.0% of total operating, 1955
55,604 or 0.8% of total operating, 1954
46,065 or 0.7% of total operating, 1953
32,734 or 0.6% of total operating, 1952

Oilburner Replacements

Number	Year	%
40,936	1940	15.2
56,315	1941	16.9
33,170	1942	33.3
13,910	1943	41.6
38,280	1944	76.7
29,847	1945	20.5
36,540	1946	8.0
58,613	1947	6.6
90,750	1948	19.9
58,200	1949	10.2
96,960	1950	11.5
91,808	1951	13.6
103,283	1952	13.3
104,567	1953	12.7
118,080	1954	16.0
119,483	1955	14.8
141,838	1956	20.0
151,256	1957	26.0
173,652	1958*	30.5
205,132	1959	32.2

*Revised

What Kind of Equipment

1958* %	1959 %		Prewar %
31	24	Conversion	80.5
24	22	Boiler Units	9.1
45	54	Furnace Units	10.4

*Calculated on revised basis, taking into account overlap in Census reports of burner shipments. If a plant manufactures an oilburner and combines it with a furnace or boiler of its own manufacture, data for this equipment are reported under boiler or furnace-boiler units. If a plant manufactures a furnace, but combines it with a burner purchased from another manufacturer, data for this furnace are reported under warm air furnaces; data for the oilburner already have been reported by the burner manufacturer as a conversion oilburner. Estimates for these two years allow greater weight for reports from dealers on the type of oilburning equipment they sell.

place gas heating—actually 1.7% or 10,830 jobs. Combining these with the 208,318 burner jobs used to replace coal fired equipment—32.7% of 1959 installations—the two groups represent the total oilheating sold to replace other fuels. Burner sales in 1959 were divided:

New Homes	33.4%	212,777
Replacements	32.2	205,132
Conversions	34.4	219,148
		637,057

Dealers who reported on their replacement oilburner activity, also indicated what type of equipment they used in place of the worn out oilheating equipment. They reported that during 1959 straight conversion oilburners were used in 35.3% of all replacement jobs, boiler-burner units were used in 19.8% of the replacement jobs furnace-burner units were sold to take the place of 44.9% of the oilburners replaced in 1959. By comparison, in 1958 replacement oilburner jobs were divided this way: Conversion oilburners were used in 34% of these installations, boiler-burner units in 30% and furnace-burners units in the remaining 36%.

The table reflects dealer reports on the types of oilburner replacements they installed in 1959.

	Conv. Burners	Boiler Units	Furnace Units
New England	27.4%	41.8%	30.8%
Mid-Atlantic	46.6	31.0	22.4
South	10.5	15.5	74.0
Midwest	37.1	6.3	56.6
Pacific	31.7	..	68.3
Total U. S.	35.3	19.8	44.9

The table, "Losses to other Fuels," breaks down the 109,262 oilburners removed during 1959 and replaced with equipment using competitive fuels. This total amounted to 1.2% of all oilburners operating during 1959.

The division of oilburner sales during 1959 reflected a substantial increase in the sale of oilfired furnaces. Conversion oilburners, those jobs in which a separate oilburner is installed, were used in 24% of the jobs; in 1958 conversions oilburners accounted for 31% of sales. Boiler-burner units in 1959 were used in 22% of oilheating installations, a slight drop from 24% the previous year, while furnace-burner units jumped to 54% of installations. In 1958 furnace-burner units had gone into 45% of the jobs.

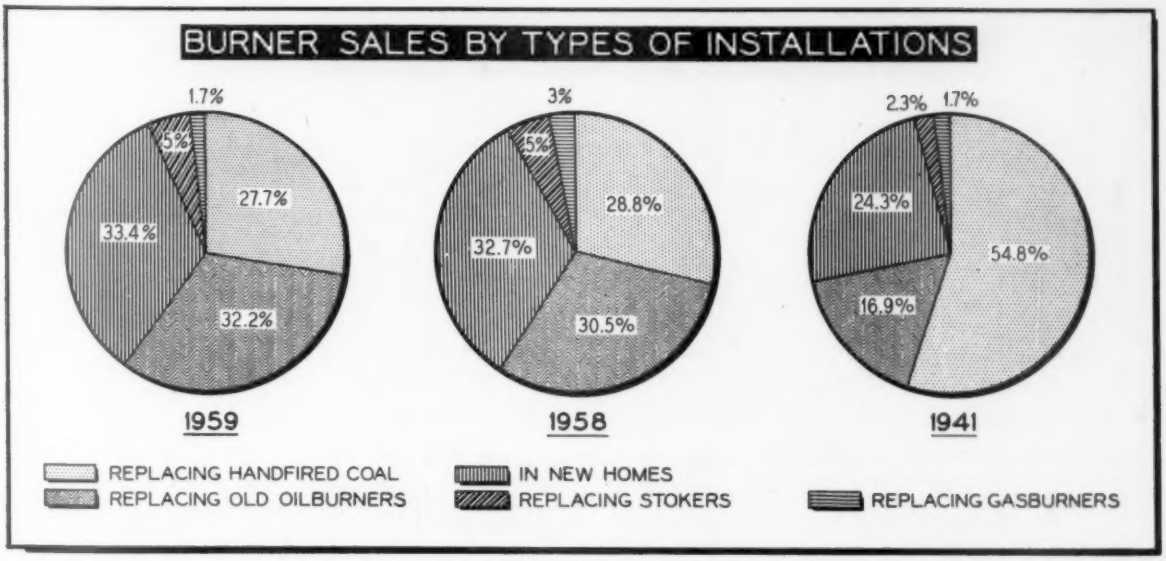
Conversion oilburners totaled 152,894 in 1959; there were 140,153 boiler-burner units installed and 344,010 furnace-burner units installed.

At the end of 1959 there were an estimated 9,647,590 oilburners in use, divided: Conversion oilburners, 5,970,042; boiler-burner units, 1,271,

TABLE 4

Conversion Burner Price Trends

RETAIL Average	RETAIL % change prev. yr.	RETAIL Aver. Min.	RETAIL % change prev. yr.		FACTORY Average	FACTORY % change prev. yr.	FACTORY Aver. Min.	FACTORY % change prev. yr.
$692	..	$554	..	1929	$240	..	..	..
629	— 9.1	516	— 6.8	1930	195	—18.7	..	..
495	—21.3	413	—19.9	1931	160	—18.0	..	..
438	—11.5	371	—10.1	1932	140	—12.5	..	..
395	— 9.8	341	— 8.1	1933	129	— 7.8	$109	..
341	—13.6	310	— 9.0	1934	118	— 8.5	99	— 9.1
317	— 7.0	275	—11.2	1935	98	—16.9	88	—11.1
300	— 5.3	266	— 3.2	1936	94	— 4.1	85	— 3.4
293	— 2.3	255	— 2.6	1937	86	— 8.5	82	— 3.5
263	—10.2	236	— 7.4	1938	79	— 8.1	76	— 7.3
240	— 8.7	218	— 7.6	1939	78	— 1.3	69	— 9.2
233	— 2.9	210	— 3.7	1940	76	— 2.6	63	— 8.7
250	+ 7.2	226	+ 7.6	1941	81	+ 6.9	65	+ 3.2
267	+ 6.8	245	+ 8.4	1942	85	+ 4.9	73	+12.3
276	+ 3.3	247	+ 0.9	1943	86	+ 1.2	76	+ 4.1
280	+ 1.4	258	+ 4.7	1944	98	+13.9	78	+ 2.6
313	+11.8	292	+13.2	1945	94	— 4.1	84	+ 7.7
370	+18.2	294	+ 0.7	1946	119	+26.6	90	+ 7.1
392	+ 6.0	353	+20.1	1947	125	+ 5.0	107	+18.9
422	+ 7.6	349	— 1.1	1948	117	— 6.4	101	— 5.6
352	—16.6	329	— 5.7	1949	107	—14.5	97	— 4.0
352	..	319	— 3.0	1950	108	+ 0.9	97	..
397	+11.3	330	+ 3.4	1951	116	+ 7.4	102	+ 5.2
375	— 5.5	326	— 1.4	1952	118	+ 1.7	102	..
368	— 1.9	320	— 1.8	1953	112	— 5.1	100	— 0.2
384	+ 4.0	319	..	1954	99	—11.6	95	— 5.0
378	— 1.5	312	— 2.1	1955	93	— 6.1	95	..
366	— 3.2	311	— 0.3	1956	98	+ 5.4	97	+ 2.1
357	— 0.2	312	+ 0.3	1957	96	— 2.0	93	— 4.0
387	+ 8.4	314	+ 0.6	1958	103	+ 7.2	97	+ 4.3
360	— 7.0	316	+ 0.6	1959	99	— 3.9	97	..



256 and furnace-burner units, 2,406,292. By percents, conversion oilburners at the end of 1959 represented 62% of all oilburners operating, down slightly from 63% at the end of 1958; boiler-burner units represented 13% of installations, a slight increase from 12% at the end of 1958; furnace-burner units operating were up one point to 25% at the end of 1959.

Annual sales of oilburning boiler-burner units in TABLE 5 include retail and factory value of units, along with the number in use at the end of each year. In 1959 there were 140,153 boiler-burner units installed, equal to 22% of all oilheating sold. This compares with a total of 136,397 boiler-burner units sold, representing 24% of 1958 oilheating installations. The net gain in boiler-burner units increased the number operating on December 31, 1959 to an estimated total of 1,271,256.

TABLE 6 contains retail and factory average prices for factory-assembled boiler-burner units, as well as average minimum prices for this equipment. In 1959 the dealers reported oil boiler-burner units installed for an average of $802, an increase of 4.4% over 1958's average price of $768, and compared with $752 reported in 1957. Average minimums declined 0.9% to $733.

On the wholesale level, average prices paid by dealers for oil boiler-burner units advanced slightly from $395 in 1958 to $397 in 1959, while average minimums reported were down 1.2% to $340, compared with $344 for the previous year.

Cast-iron and steel boilers produced during 1959 are estimated at 289,250, a 6% increase over the revised total of 274,185 for 1958. Cast-iron boilers reached a total of 203,250, an 8% increase over 1958 output; the 86,000 steel boilers produced represented the same total as reported for 1958.

Incidentally, steel boiler totals are revised back through 1956, based upon information which revised previously reported figures to eliminate duplication in reporting.

TABLE 5

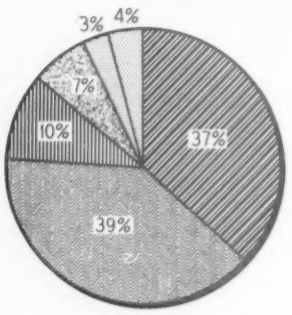
Boiler-Burner Units

Sales	*Retail Value*	*Factory Value*	*Year*	*No. in Use (End of Year)*
3,000	.....	.....	1932	3,800
7,800	.....	.....	1933	11,600
9,300	.....	.....	1934	20,890
10,510	$9,511,600	.....	1935	31,400
15,025	9,781,300	.....	1936	46,250
14,430	8,557,000	$3,795,100	1937	60,240
14,220	7,877,900	3,711,400	1938	73,930
19,220	9,744,500	4,286,100	1939	92,540
26,955	13,322,700	5,005,300	1940	118,560
39,990	21,874,500	9,717,600	1941	155,720
9,313	5,289,800	2,877,700	1942	163,040
6,637	1,705,600	2,090,600	1943	164,240
6,440	3,909,100	2,002,800	1944	167,040
9,027	5,984,900	2,491,500	1945	175,165
45,130	34,765,900	18,088,100	1946	219,131
63,054	52,650,000	23,014,700	1947	277,771
42,785	40,260,700	16,600,600	1948	318,417
55,324	43,872,000	20,027,300	1949	368,286
82,141	61,687,900	26,038,700	1950	434,401
58,731	46,573,700	22,688,300	1951	480,722
69,207	53,635,000	26,783,000	1952	537,799
116,094	82,427,000	45,393,000	1953	623,513
184,512	138,200,000	68,085,000	1954	780,204
196,539	143,271,000	69,529,000	1955	929,225
191,482	144,569,000	70,274,000	1956	1,058,074
139,307	104,759,000	52,658,000	1957	1,129,075
136,397	104,752,900	53,876,800	1958*	1,200,270
140,153	112,402,700	55,783,700	1959	1,271,256

*Revised

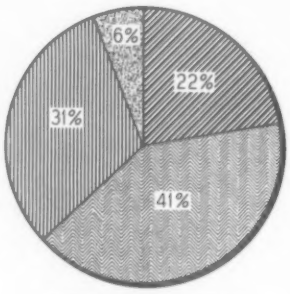
Prior to 1953 this table represented only the boiler-burner units reported to the Census Bureau by oilburner manufacturers. It did not include units assembled either by boiler manufacturers in their plants or field-assembled by dealers. In 1953 it included those assembled by boiler manufacturers but not by dealers. In 1959 it includes all three, estimated as follows: By oilburner manufacturers, 51,540; by boiler manufacturers, 54,976; by dealers in the field, 33,637.

SIZES OF 1959 OILFIRED INSTALLATIONS



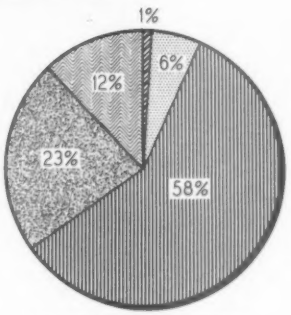
FIRING RATES

37% LESS THAN 1.0 GPH
39% 1.0 TO 1.35 GPH
10% 1.36 TO 1.65 GPH
7% 1.66 TO 2.0 GPH
3% 2.01 TO 3.0 GPH
4% 3.01 GPH AND LARGER



BOILER SIZES

22% LESS THAN 300 SQ FT
41% 301 TO 500 SQ FT
31% 501 TO 650 SQ FT
6% FROM 651 TO 800 SQ FT



FURNACE SIZES

1% LESS THAN 50,000 BTU
6% 50 TO 75,000 BTU
58% 76 TO 100,000 BTU
23% 101 TO 125,000 BTU
12% 126,000 BTU AND LARGER

TABLE 6

Prices of Factory-Assembled Boiler-Burner Units

RETAIL

Average	% change prev. yr.		Aver. Min.	% change prev. yr.
$593	— 8.9	1937	$516	— 8.8
554	— 6.5	1938	482	— 6.6
507	— 8.3	1939	441	— 8.5
495	— 2.4	1940	365	—17.2
547	+11.5	1941	378	+ 3.6
568	+ 3.8	1942	473	+25.1
533	— 6.2	1943	361	—23.7
607	+13.9	1944	450	+24.6
663	+ 9.2	1945	539	+19.8
770	+16.1	1946	589	+ 9.3
835	+ 8.4	1947	691	+17.3
941	+12.7	1948	710	+ 2.7
793	—15.7	1949	682	— 4.0
751	— 5.3	1950	661	— 3.1
793	+ 5.6	1951	686	+ 3.8
775	— 2.3	1952	699	+ 1.9
710	— 8.4	1953	703	— 0.6
749	+ 5.5	1954	704	..
748	..	1955	704	..
755	+ 1.0	1956	724	+ 2.8
752	— 0.4	1957	727	+ 0.4
768	+ 2.1	1958	740	+ 1.8
802	+ 4.4	1959	733	— 0.9

FACTORY

$263	..	1937	$246	..
261	— 0.7	1938	244	— 0.8
223	—14.5	1939	208	—14.7
215	— 3.6	1940	183	—12.0
243	+13.0	1941	201	+ 9.9
309	+27.1	1942	229	+13.4
315	+ 2.0	1943	231	+ 1.0
311	— 1.3	1944	216	— 6.5
276	—11.2	1945	233	+ 7.9
351	+27.2	1946	267	+14.6
365	+ 4.0	1947	310	+16.1
388	+ 6.3	1948	345	+11.3
362	— 6.7	1949	342	— 0.9
317	—12.4	1950	311	— 9.1
393	+24.0	1951	336	+ 8.0
387	— 1.5	1952	324	— 3.8
391	+ 1.0	1953	322	— 0.1
369	— 5.6	1954	322	..
363	— 1.6	1955	325	+ 1.0
367	+ 1.1	1956	340	+ 4.6
378	+ 3.0	1957	351	+ 3.2
395	+ 4.4	1958	344	— 2.0
397	+ 0.5	1959	340	— 1.2

Oil boilers declined 2% to a total of 162,060, compared to a revised total of 165,477 in 1958. The oil boilers were divided: Cast-iron, 97,560, representing 48% of cast-iron boiler production and 64,500 steel boilers produced for oilfiring, 75% of production.

In TABLE 8 appear data on furnace-burner units sold during 1959, including comparative figures for previous years, retail and factory values of units and the number operating.

There were 344,010 furnace-burner units installed in 1959, representing 54% of all jobs sold, compared with a revised total of 255,743 furnace units in 1958, when furnace-burner units represented 45% of all installations.

Average retail and wholesale prices of furnace-burner units reported for 1959 showed modest increases, average minimums at retail declined slightly and remained the same at the wholesale level. Average installed price for a furnace-burner unit in-

TABLE 7

Heating Boiler Sales

	CAST IRON Total Output	No. for oil	% for oil		STEEL Total Output	No. for oil	% for oil
1935	160,105	29,310	18.3	1935	14,415	14,181	98.1
1936	186,560	41,922	22.5	1936	19,242	18,622	96.8
1937	169,707	58,462	34.2	1937	16,569	15,321	92.7
1938	135,282	54,139	40.0	1938	19,098	17,218	90.3
1939	146,919	61,070	41.6	1939	23,658	21,857	92.4
1940	168,839	77,764	46.1	1940	24,580	23,206	94.5
1941	178,076	80,176	45.0	1941	25,666	24,173	94.2
1942	111,875	10,765	9.6	1942	13,000	7,238	55.7
1943	81,500	8,852	10.9	1943	3,550	1,230	34.7
1944	75,760	19,140	25.3	1944	3,310	2,168	65.5
1945	66,740	20,088	30.1	1945	16,008	10,979	68.6
1946	161,667	46,548	28.8	1946	34,820	33,777	97.0
1947	233,905	73,279	31.3	1947	105,714	94,123	89.0
1948	180,345	61,781	34.3	1948	92,718	82,716	89.2
1949	144,275	50,495	35.0	1949	84,876	74,520	87.8
1950	194,509	76,406	39.3	1950	166,836	156,325	93.7
1951	159,007	68,214	42.9	1951	92,892	86,950	93.6
1952	187,596	89,670	47.8	1952	107,755	102,367	95.0
1953	208,644	99,706	47.8	1953	113,814	106,985	94.0
1954	208,438	104,219	50.0	1954	104,062	97,818	94.0
1955	250,126	125,063	50.0	1955	124,874	117,832	94.0
1956	237,620	137,592	57.0	1956	82,000*	73,800	90.0
1957	209,106	106,627	51.0	1957	91,000*	81,900	90.0
1958	188,195	94,097	50.0	1958	86,000*	71,380	83.0
1959	203,250	97,560	48.0	1959	86,000	64,500	75.0

TABLE 8

Furnace-Burner Units

Sales	Retail Value	Factory Value	Year	No. in Use (End of Year)
3,175	$2,457,400	.....	1935	5,600
7,620	5,044,400	.....	1936	13,120
11,390	6,526,500	$2,540,000	1937	24,010
11,290	6,243,400	2,427,300	1938	34,140
16,900	8,771,100	3,464,500	1939	49,850
36,410	19,115,300	7,646,100	1940	82,960
55,295	32,181,700	12,939,000	1941	133,180
18,543	8,029,100	5,099,300	1942	149,990
5,445	1,691,900	1,503,200	1943	150,750
5,590	3,471,400	1,464,600	1944	152,780
16,889	8,968,100	4,104,000	1945	167,980
38,602	25,429,000	12,293,200	1946	204,359
155,414	103,039,500	50,043,300	1947	352,002
100,290	65,389,100	30,989,600	1948	447,277
118,640	63,828,300	35,473,400	1949	554,225
156,661	95,876,500	48,878,200	1950	680,321
139,062	94,562,200	45,579,000	1951	790,000
165,629	107,327,000	54,657,000	1952	926,601
325,229	205,582,000	116,107,000	1953	1,191,936
302,600	194,572,000	92,898,000	1954	1,435,325
371,242	223,859,000	113,229,000	1955	1,716,809
347,504	207,807,000	97,996,000	1956	1,950,645
290,224	159,623,000	78,651,000	1957*	2,098,565
255,743	151,655,600	70,840,800	1958*	2,232,054
344,010	210,190,100	99,762,900	1959	2,406,292

*Revised

Prior to 1953 this table represented only the furnace-burner units reported to the Census Bureau by oilburner manufacturers. It did not include units assembled either by furnace manufacturers in their plants or field-assembled by dealers. In 1953 it included those assembled by furnace manufacturers but not by dealers. In 1959 it includes all three, estimated as follows: By oilburner manufacturers, 157,750; by furnace manufacturers, 175,940; by dealers in the field, 10,320.

creased 1.6% to $611, compared with $601 in 1958 and $550 in 1957; average minimum retail prices dropped to $583, 1.7% below the 1958 price of $593, but somewhat higher than the $543 reported during 1957. Average wholesale prices of furnace-burner units were up 4.7% to $290, compared with $277 and $271 for the years 1958 and 1957; average minimum wholesale prices remained virtually the same, $270 in 1959 and $269 in both 1958 and 1957.

Preliminary estimates of warm air furnace shipments for 1959, with revised figures for 1958, appear in TABLE 10. During 1959 forced air furnace shipments increased by 16.8%, with only gas fired forced air furnaces registering an increase. All other categories were below 1958. Thus, the total for 1959 of 1,387,899 forced air furnaces shipped in 1959 were divided: Coal, 12,254, down 10.9%; oil, 335,523, down 1.9% and gas, 1,040,122, an increase of 24.9% Gravity furnace shipments were 4.9% below 1958, totaling 56,528, divided: Coal, 24,615, down 7%; oil, 2,065, down 15.9% and gas, 29,848, a decrease of 2.2%. The grand total of 1,444,427, compares with 1,247,805 for 1958.

TABLE 10

Warm Air Furnace Shipments

1959		1958*
FORCED AIR		
12,254	Coal	13,758
335,523	Oil	342,077
1,040,122	Gas	832,522
1,387,899		1,188,357
GRAVITY		
24,615	Coal	26,467
2,065	Oil	2,455
29,848	Gas	30,526
56,528		59,448
1,444,427	Grand Total	1,247,805

*Revised

During 1959 there were a total of 337,588 oilfired furnaces shipped, with forced air furnaces accounting for 335,523 of the total and gravity units, 2,065. These totals compare with 342,077 forced air oil furnaces shipped in 1958. Total oilfired furnaces represented a decline of 2% from the 344,532 shipped in 1958.

Dealers again this year reported on their activity in selling oil powered water heaters, those fired with a gun type oilburner. From all indications dealers installed approximately 22,000 of these units. On the average, the dealers paid an average of $171 for such oilfired water heaters and installed them for an average price of $295. Sectional price information and the weighted national average for oil water heaters follow:

	Wholesale	Retail
New England	$171	$294
MidAtlantic	165	288
South	160	289
Midwest	168	302
Pacific	304	437
Total U. S.	$171	$295

Revised figures for commercial-industrial oilburners used for oilheating appear in TABLE 11. These have been revised for the past few years to conform more closely to factory shipments reported by the Bureau of Census. Thus, on an estimated total of 43,-

TABLE 9

Price Trends of Factory-Assembled Forced-Air Units

Average	% change prev. yr.		Average Min.	% change prev. yr.
RETAIL				
$573	—13.4	1937	$499	—13.3
553	— 3.5	1938	481	— 3.4
519	— 6.2	1939	402	—16.4
525	+ 1.2	1940	360	—10.4
582	+10.9	1941	402	+11.7
611	+ 4.9	1942	413	+ 2.7
613	+ 0.3	1943	418	+ 1.2
621	+ 1.3	1944	434	+ 3.8
531	—14.5	1945	479	+10.4
659	+24.1	1946	526	+ 9.8
663	+ 0.6	1947	610	+15.9
652	— 1.7	1948	623	+21.3
583	—10.6	1949	538	—13.7
612	+ 5.0	1950	610	+13.4
680	+11.1	1951	624	+ 2.3
648	— 4.7	1952	639	+ 2.4
638	— 1.6	1953	625	— 2.2
643	+ 0.8	1954	608	— 2.7
603	— 6.2	1955	585	— 3.8
598	— 1.0	1956	585	..
550	— 8.0	1957	543	— 7.2
601	+ 9.3	1958	593	+ 9.2
611	+ 1.6	1959	583	— 1.7
FACTORY				
$223	..	1937	$210	..
215	— 3.6	1938	204	— 2.8
205	— 4.7	1939	198	— 2.9
210	+ 2.4	1940	196	— 2.0
234	+11.4	1941	201	+ 2.5
275	+17.5	1942	236	+17.4
276	+ 0.4	1943	241	+ 2.1
262	— 5.1	1944	217	— 9.9
243	— 7.3	1945	239	+10.1
318	+30.9	1946	265	+10.9
322	+ 1.3	1947	297	+12.1
309	— 4.0	1948	304	+ 2.3
299	— 3.2	1949	297	— 2.3
312	+ 4.3	1950	306	+ 3.0
328	+ 5.1	1951	316	+ 3.3
330	+ 0.6	1952	311	— 1.6
357	+ 8.2	1953	300	— 3.5
307	—14.0	1954	294	— 2.0
305	— 0.6	1955	280	— 4.8
282	— 7.0	1956	280	..
271	— 3.9	1957	269	— 3.9
277	+ 2.2	1958	269	..
290	+ 4.7	1959	270	..

TABLE 11

Commercial Oilheating

Sales		No. Operating (End of year)
14,990	1935	176,240
18,435	1936	192,830
19,380	1937	210,275
13,955	1938	222,880
16,445	1939	237,680
20,710	1940	256,320
34,750	1941	287,595
55,360	1942	293,120
44,470	1943	285,045
30,705	1944	286,680
30,515	1945	288,812
40,498	1946	325,310
48,780	1947	369,210
28,433	1948	393,550
25,220	1949	414,310
34,737	1950	445,573
40,565	1951	482,088
36,417	1952	514,863
41,021	1953	551,782
37,091	1954	585,164
41,284	1955*	622,320
42,414	1956*	660,493
43,958	1957*	700,055
36,225	1958*	732,657
43,473	1959	771,783

*Revised

TABLE 12

Domestic and Commercial Stokers

Total Sales		CLASS 1 Bitum.	CLASS 1 Anth.	CLASS 1 Total	CLASS 2 Bitum.	CLASS 2 Anth.	CLASS 2 Total	End Year In Use
144,758	1940	123,167	12,837	136,004	7,784	970	8,754	637,695
182,956	1941	158,734	17,110	175,844	6,513	599	7,112	802,345
79,062	1942	62,753	11,562	75,315	4,391	356	4,747	877,455
17,765	1943	4,460	472	4,932	10,790	2,043	12,833	894,330
31,603	1944	1,714	450	2,164	27,196	2,243	29,439	925,435
119,279	1945	89,522	3,525	93,047	24,349	1,883	26,232	1,029,150
181,223	1946	164,304	7,044	171,348	8,967	908	9,875	1,160,755
61,596	1947	53,372	3,364	56,736	4,469	391	4,860	1,186,195
76,477	1948	61,355	9,504	70,859	4,857	761	5,618	1,238,225
29,994	1949	21,988	4,991	26,979	2,612	403	3,015	1,235,560
19,635	1950	13,102	4,191	17,293	1,855	487	2,342	1,175,537
19,174	1951	12,451	4,268	16,719	1,941	414	2,355	1,124,945
18,801	1952	8,572	8,068	16,640	1,618	543	2,161	1,079,524
13,257	1953	6,801	4,858	11,659	1,266	332	1,598	990,855
13,216	1954	4,868	6,904	11,772	1,032	412	1,444	893,657
13,277	1955	3,926	7,920	11,846	1,097	334	1,431	793,216
13,206	1956*	3,358	8,551	11,909	889	408	1,297	739,377
12,461	1957*	3,021	8,321	11,342	853	266	1,119	690,015
12,097	1958*	3,626	7,569	11,195	704	198	902	619,016
12,200	1959	3,155	8,288	11,443	601	256	857	548,143

*Revised

473 burners for 1959, there are estimated to be 771,873 such burners operating at the end of 1959. This compares with a revised total of 36,225 such burners reported for 1958, a revised total of 43,958 for 1957 and a revised total of 42,414 in 1956.

During 1959 these commercial-industral oilburners included types using both distillate and residual fueloils. There were an estimated 22,171 burners, 51% of the 1959 total, which were designed to use distillate fueloils and 21,302, or 49% of the total, designed for residual fueloils. The distillate units were those with capacities above 6 gph. In 1958, 53% of the commercial-industrial oilburners, 19,199, were for use with distillates and the remaining 47%, 17,026, were for use with residual fuels.

Available information indicates that total stoker installations made during 1959 were about the same as the revised total achieved during 1958, with an increase of about 10% in anthracite stokers counterbalanced by a drop in sales of bituminous types. In 1959 there were an estimated 12,200 stokers sold, just a fraction up from the revised total of 12,097 for 1958. These are Class I units, using up to 60 lbs. of coal per hour and Class II units, using up to 100 lbs. of coal per hour. Details appear in TABLE 12.

At year end 1959 the estimated 548,143 coal stokers in use represented a net loss of 70,873 units, taking into account an estimated 31,853 stokers removed and replaced with oilfired equipment, plus an estimated 50,000 removed for gas or electric heating equipment.

Gas heating in 1959 achieved an estimated total of 1,336,995 burners and units, an increase of 15% over the revised total of 1,159,450 sold in 1958. These are estimates based on projections made from factory shipments supplied by the Gas Appliance Manufacturers Association. The figures for the years prior to 1950 reported factory shipments without allowances for replacements, losses to other fuels or stock changes. Since 1950, however, GAS HEAT magazine has calculated the figures to show actual sales and installations.

Preliminary estimates of gas heating for 1959 anticipate installation of 151,555 conversions oilburners, down slightly from 154,030 installed in 1958; an estimated 132,085 gas fired boilers as opposed to 128,060 such units sold the previous year and 1,052,355 gas furnaces, up considerably from 877,040 installed in 1958.

At the end of 1959 there were an estimated 11,943,826 gas fired units in domestic heating installations.

TABLE 13

Domestic Gas Burners

Annual Sales Conversion	Boiler Units	Furnace Units	Total		No. in Use (End of Year)
21,687	10,201	56,666	88,554	1940	1,187,486
36,335	15,007	85,043	136,385	1941	1,310,222
6,087	10,966	29,412	46,465	1942	1,352,040
800	3,485	8,970	13,255	1943	1,363,970
3,180	5,217	12,113	20,510	1944	1,382,430
14,183	14,959	27,676	56,818	1945	1,433,570
400,000	32,500	230,000	662,500	1946	2,027,548
90,000	44,000	188,000	322,000	1947	2,297,000
48,500	30,000	193,000	271,500	1948	2,538,500
290,000	50,000	297,000	637,000	1949	3,119,600
344,275	70,455	576,270	991,000	1950	4,087,300
170,700	62,900	418,890	652,560	1951	4,677,200
234,240	60,825	452,690	747,755	1952	5,332,300
200,335	82,045	517,810	800,190	1953	6,077,200
223,550	71,115	652,530	947,195	1954	6,947,500
207,760	89,005	855,435	1,152,200	1955	7,998,800
179,980	106,000	801,130	1,087,110	1956	8,980,600
168,000	108,370	709,810	986,180	1957	9,797,800
154,350	128,060	877,040	1,159,450	1958*	10,798,100
151,555	132,085	1,052,355	1,336,995	1959*	11,943,826

*Revised

Dealers liked 1959

Sales and Profits increase on the Strength of increased selling Activity

THE YEAR just ended was quite a good one for oilheating dealers even though the competitive fuel picture continued pretty cloudy. The reporting dealers did better on the average than they did in 1958 as we see in some detail in TABLE 1.

Among those dealers selling both oilheating equipment and fueloil, 16% say that 1959 was their best profit year. Another 46% called it a good year, 28% a fair year and only 10% a poor year. The chances are that those companies saying the year was poor showed an operating loss.

For 1958 only 12% had called it their best year and 45% a good year.

Among the oilheating dealers selling equipment but no fuel we also find 16% with their best profits in 1959, and 49% calling it a good year. Again this is better than they rated 1958 which was 10% and 42% by comparison.

The sales of new installations throughout the year is somewhat unorthodox in pattern with only September showing a minus comparison with 1958 and the later fall months showing strong pluses.

The industry apparently turned the corner after three years declining sales. The improvement was not so much at the expense of other fuels since both gas and electric heat did very well, but rather reflected more sales activity on the part of the oilheating crowd particularly in the 53 markets where more than two million dollars was spent in cooperative advertising campaigns for oil heat.

TABLE 2

1960 outlook is better

	—1960 FORECAST— Installations above 1959	Will be below 1959
New England	+ 3.4%	
Metro New York	7.5	
Other Mid-Atl.	11.1	
South Atlantic	18.6	
Midwest		—1.7%
Pacific Northwest		—0.5
1960 ALL SECTIONS	+ 5.0%	

The good feeling over the year's profits carries forward the dealers' thinking for 1960 based on the entire country, the weighted average shows that they expect new installations to be 5% above 1959. The greatest measure of optimism is in the South Atlantic states while the Midwest and Pacific Northwest each expect a small setback.

TABLE 1

One-sixth found 1959 their Best year

COMBINATION DEALERS SELLING OILHEATING AND FUELOIL	Best Year	Good Year	Fair Year	Poor Year
New England	16%	64%	9%	11%
Metro New York	42	33	25	..
Other Mid-Atl.	11	61	22	6
South Atlantic	..	45	18	37
Midwest	8	31	54	7
Pacific Northwest	14	44	13	19
ALL SECTIONS	16	46	28	10
OILHEATING DEALERS SELLING NO FUELOIL				
ALL SECTIONS	16%	49%	31%	4%

A year ago a similar group of dealers predicted that installations in '59 would be only a third of one per cent above 1958. They actually turned out 12% above last year. We can hope that dealer optimism for the new year is just as conservative.

It is worth noting that when we do these large industry questionnaire studies two or three times each year the reporting groups are not, as a rule, the same. For the September number which carries a fueloil management economics study, all reporting dealers are definitely in the fueloil business regardless of what else they sell. For this January issue project, they are definitely in the oilheating equipment business, whether or not they might sell fueloil.

The service management analysis done each alternate May issue is limited to companies operating service departments even though they may not sell oil or equipment or either. These qualifications account for some differences of a minor nature in answers to what appear to be similar questions.

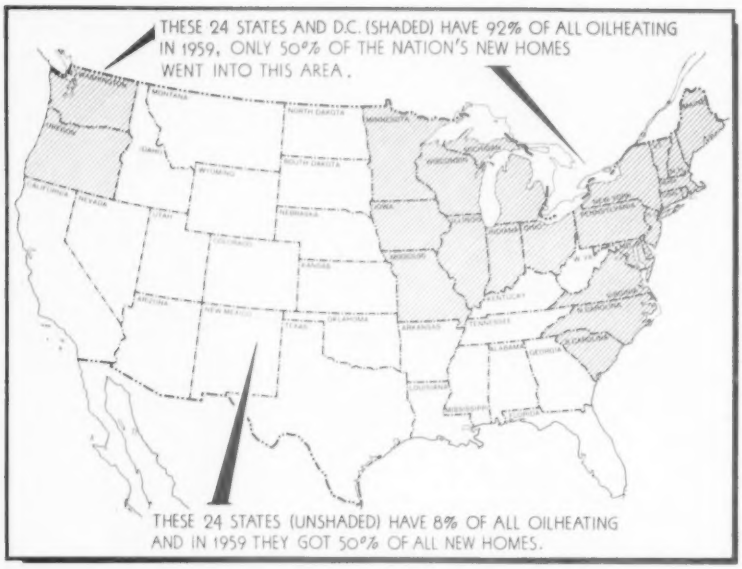
In other words, the fueloil and oilheating industry is somewhat complex because it embraces these three major functions and a lot of dealers handle any one or more of these activities.

In TABLE 3, we show the composite dollar volume of all the reporting companies. The figures of the individual firms are weighted for size in arriving at the percentages, and then the geographic areas are weighted to arrive at

TABLE 3

Fueloil is still the largest Dollar Item

	Oil-heating Eqpt.	Other heating Eqpt.	Burner Service	Fuel-oil	Coal	Gasoline TBA	Plumbing	Air-conditioning	Other
New England	13%	2%	5%	71%	4%	1%	1%	1%	2%
Metro New York	11	2	8	68	7	..	3	1	..
Other Mid-Atl.	12	5	9	52	7	2	9	3	1
South Atlantic	19	21	9	30	1	7	..	12	1
Midwest	9	22	8	40	2	10	4	4	1
Pacific Northwest	16	9	15	49	3	..	..	6	2
ALL SECTIONS									
Large Cities	12	12	7	56	4	3	1	4	1
Medium Cities	10	9	9	53	1	6	11	1	..
Small Cities	17	8	9	41	9	5	6	4	1
ALL CITIES	12%	10%	8%	53%	5%	4%	4%	3%	1%


THESE 24 STATES AND D.C. (SHADED) HAVE 92% OF ALL OILHEATING IN 1959. ONLY 50% OF THE NATION'S NEW HOMES WENT INTO THIS AREA.
THESE 24 STATES (UNSHADED) HAVE 8% OF ALL OILHEATING AND IN 1959 THEY GOT 50% OF ALL NEW HOMES.

the final figures. Thus, the entire study is eventually worked into a single line just as though all the companies were merged into a single firm.

That firm had 12% of its billing in oilheating equipment, 10% in other heating equipment, 8% in oilheating service, 53% in fueloil, 5% in coal, 4% in gasoline and other automotive items, 4% in plumbing, 3% in airconditioning, and 1% in all other activities.

Thus, we see that fueloil at 53% remains the dominant factor in the industry. This is a two point drop from last year's 55%.

When we show in TABLE 3 the separation between city sizes, we use the same breakdown as in previous studies. A small city is one with population up to 25,000; a medium city has 25,000 to 250,000 inhabitants; and the large city, of course, is above that figure.

Oilheating has had difficult going in much of the new home market largely because its original equipment cost is substantially above that of gas or electric heat. Again, the map brings out an interesting point.

New home building is much more active in areas of the country where oilheating has its thin markets. Most of the South favors gas or electric heat and that's where the bulk of new building is being done.

Notice in the map the 24 states and D. C. which are considered the prime oilheating areas. They have 92% of all oilburners, but get just 50% of the new home construction. In 1958, this area had only 48% of the new homes so there was a slight change in our favor.

It is also worth mentioning that the heating load in the southern home is fairly light, so while gas heating has quite a few more homes to its credit fueloil is still very much the leader in point of energy consumption for heating, running probably as much as a third more than gas in Btu output.

In TABLE 4 we show first the per cent of total oilheating installations that went into new homes. This was just a third of the year's crop, and of course, it is all to the good because each of these is a new fuel user.

The strong change in the table this year is in the share of the new home market sold direct from the oilheating factory to the builder. This is 20% of total new home jobs compared with 15% in 1958. The fueloil distributors sold 35% of the new home installations compared with 33% the year before. Thus the heating contractor did only 45% in 1959 while he had enjoyed 52% of that business the previous year. The trend here shows up quite clearly in the special chart.

Gas and electric heating continue to gain at our expense, although this year for the first time we also show electric heat and it seems to be taking some

TABLE 4

Who sells the New Home Oilheating?

	New Homes	SOLD BY		
	Percent of Total Installations	*Factory to Builder*	*Fueloil Distributors*	*Heating Contractors*
New England	35%	7%	56%	37%
Metro New York	25	28	48	24
Other Mid-Atl.	26	13	38	49
South Atlantic	53	14	7	79
Midwest	30	35	21	44
Pacific Northwest	48	2	24	74
ALL SECTIONS	33%	20%	35%	45%

TABLE 5

Dealers Estimate their Fuel Competition

	—Installations by— Fuel Type			—GAS COSTS—	
	Oil	*Gas*	*Electric*	*More*	*Less*
New England					
Large Cities	60%	39%	1%	24%	..
Medium Cities	79	20	1	30	..
Small Cities	94	6	..	30	..
ALL CITIES	73	26	1	27	..
Mid-Atlantic					
Metro New York	45	55	..	24	..
Other Large Cities	35	64	1	16	..
Medium Cities	79	17	4	29	..
Small Cities	59	40	1	31	..
ALL CITIES	49	50	1	23	..
South Atlantic	42	51	7	15	..
Midwest					
Large Cities	29	66	5	..	19%
Medium Cities	15	76	9	..	19
Small Cities	30	67	3	..	16
ALL CITIES	25	69	6	..	18
Pacific Northwest	42	37	21	12	..
ALL SECTIONS 1959	45%	50%	5%	11%	..
1958	49	51	*	7	..
1957	57	43	*	8	..
1956	63	37	*	13	..

* not available

business away from gas. Of course, it takes it from us too in the Pacific Northwest.

Some comparisons with 1958 are interesting. The New England figures of 73% of new installations compares with only 66% the year before. The Mid-Atlantic figure showing 49% for oil is nicely up from 46% in 1958. The South Atlantic, Midwest and the Pacific Northwest all lost ground to the other fuels, but since the New England and Mid-Atlantic areas represent 57% of the national market the net result is a gain for the industry.

In studying TABLE 5, it is important to recall that most of the cooperating dealers are located in the primary oilheating areas as shown in the map. Thus, the competitive comparisons should be considered as representative of those regions.

For example, we know that new gas installations were double the new oil installations during the year. But that applied to the country as a whole and much of the new gas business was in the South and Mountain states. Electric heat showing up with 5% of the total would indicate about 100,000 such installations which is fairly close to the facts established within that industry.

A little over half of the reporting dealers employ no regular salesmen on oilheating equipment. Those companies without salesmen, where the boss or the service department did the sales work averaged 14 installations per company. Among the companies that do have one or more salesmen (49% of all reporting companies) 59 new installations per company were averaged.

Figured another way, they averaged 37 installations per salesman. It is very clear that the majority of these salesmen had some revenue from oil or other products because they earned an average of $6,545 during the year and they would not be paid that much for making 37 equipment sales.

TABLE 6 shows how salesmen work, whether they are on straight commission or on another method and how much each group earns. Again, as in previous years the straight commission man earned the most, but there is very little difference between him and his brother working on salary and commission.

The straight salary man earned the least which has been true for several years. But the difference between the three groups gets narrower as time goes on.

The Metropolitan New York man has the highest average with the South Atlantic and Pacific Northwest almost tied for second place.

TABLE 6

Salesmen earned $6,545 Average

	Percent	*Average Income*
Salesmen on Commission	14%	$6,611
Salary and Commission	50	6,609
Straight Salary	36	6,430

	All types by Areas Earned 1959
New England	$5,275
Metro New York	7,240
Other Mid-Atl.	5,950
South Atlantic	6,716
Midwest	6,353
Pacific Northwest	6,719
1959 ALL SECTIONS	$6,545

The South Atlantic figure seems high compared with earlier years, but this time we had some men with extra large sales, apparently builder developments that pulled up their incomes. The 1959 average of $6,545 per men is a big jump from the 1958 average of $6,188. Again, it might be reasonable in showing a 6% increase since the number of installations was up 12%.

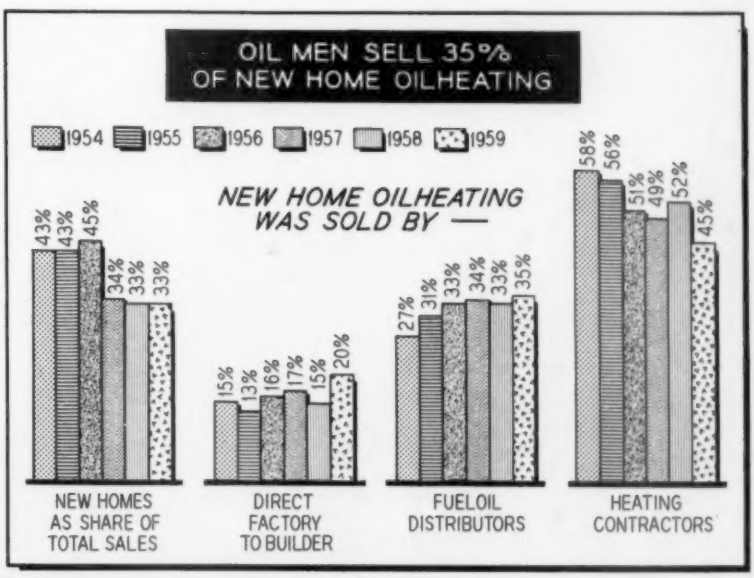
TABLE 7 shows how dealers spent money for advertising in 1959. It is not possible to know exactly what part of the outlay was for oilheating installations and what part for fueloil and other products. As a result, we show first the totals spent for all purposes related to the number of burners installed. The last column, we estimated about what proportion was spent on the burners themselves by applying the share of total sales represented by oilheating equipment income.

We make no attempt to separate their direct company advertising from their investment in the cooperative campaigns in the fueloil industry. This is done each year in the September issue since the greater emphasis should apply to the fuel rather than the equipment.

TABLE 7

How they spend Advertising Dollars

	Percent of Dealers Using	*Spent per Burner Installed*	*Charged per Burner*
Newspapers	85%	$32.00	$3.87
Direct Mail	54	10.67	1.35
Tel. Directory	82	11.14	1.27
Radio	33	15.24	1.74
Billboards	7	16.58	1.85
Television	11	14.97	2.66
1959 Weighted average		$49.93	$6.06
1958 Weighted average		55.24	7.21
1957 Weighted average		43.51	7.11
1956 Weighted average		30.85	6.87


OIL MEN SELL 35%
OF NEW HOME OILHEATING
1954 1955 1956 1957 1958 1959
NEW HOME OILHEATING
WAS SOLD BY —
43% 43% 45% 34% 33% 33%
15% 13% 16% 17% 15% 20%
27% 31% 33% 34% 33% 35%
58% 56% 51% 49% 52% 45%
NEW HOMES AS SHARE OF TOTAL SALES
DIRECT FACTORY TO BUILDER
FUELOIL DISTRIBUTORS
HEATING CONTRACTORS

How to grow in Bellevue

Jim Gilleland has worked hard and found Himself a winner in 11 Years

Gilleland Oil Co. started in what might be described as a "gold mine." Established in Bellevue, Wash., the company faced a growing demand for oilheating, without natural gas competition. Jim Gilleland made a success of his endeavor, but not because of lack of competition. He had plenty of other companies fighting him for the heating oil business. He had to couple determination with hard work and personal service to insure that his business grew and grew.

"HI, JIM"—and again, "Hello Jim, how are you tonight?" Jim Gilleland and his attractive wife, Sylvia, were being shown to a table at the popular Crabapple restaurant in Bellevue, Washington. It seemed as though everybody knew them. And the greetings were not just a nod of recognition — there was a hearty friendliness that comes with more than a casual acquaintance.

About a year ago the Shell Oil Company picked the Gilleland Oil Company as an example to present to other Shell fueloil distributors in their publication, the *Black Star*. Special emphasis was placed on the co-operation between Gilleland Oil Company and a Bellevue Shell dealer operating a service station—each getting prospects for the other.

Some maps do not show Bellevue. A few years ago it was little more than a resort area, across Lake Washington from Seattle. The famous floating bridge was built to Mercer Island, and the short bridge from the island to the eastern shore of the lake. That made Bellevue a readily accessible suburb. Within a few years it blossomed into a full fledged city with new modern stores and business establishments of all types. What a place for a fueloil business to start and grow!

In 1947, Jim Gilleland decided that he belonged in business for himself. Prior to the war, the shipyards had proved a profitable occupation and he had been able to lay aside some money while in the service. He joined forces with his father and bought a small oil business with about 200 accounts. On rented property and with limited equipment and capital the prospects did not look highly promising.

As is the case with most small businesses making a start, the owners forgot such things as titles, dignity, hours, and many of the things which are taken for granted when working for someone else. Frequently the pay for an hour's labor was discouraging.

In 1952, five years later, Jim bought his father's interest in the business. He then purchased a property on N.E. Fourth Street, only a short block from the main business street of Bellevue, erected an unpretentious office building, installed a loading rack and four underground 10,500 gallon tanks. Another tank with pump provided fuel for the rolling stock.

Six years later the original 200 accounts had increased to about 2,200. That happened in the relatively small city of between 10,000 and 15,000 population.

At first thought it might seem that Gilleland had fallen into a gold mine. Here was a suburban district where natural gas had not been introduced and where the residents had advanced past the coal burning stage of living standards.

The facts of the matter are that other businessmen sensed the potential oil sales in the Bellevue district. During those years of increasing accounts and gallonage, eight other local firms were also out after the fueloil business. As if they were not enough competition to worry about, there were 42 more firms operating in the area, but retaining their headquarters in neighboring cities of Seattle, Kirkland and Renton.

By 1958, Gilleland estimated that he was getting approximately 20% of the fueloil business in the market where he was working. It had become far from a one man operation, but Jim still found it necessary at times to take the wheel of a fuel truck. If anyone had burner trouble and couldn't get immediate help from the Gilleland service department, they knew how to reach the owner at his home.

Jim Gilleland and his contagious smile, one of the assets which has helped his company achieve a continuing growth.

Now the compact little office is coming down. The tanks are soon to be taken out. The familiar loading rack will cease to be in down-town Bellevue. Gilleland fueloil headquarters will be in a larger and more suitable location. A modern office building will soon appear in place of the office and loading rack. Originally it was planned for the new building to have both offices and warehouse space. Before the plans were completed, there were so many requests for office space that the warehousing may have to find space in less demand.

That much of the story is not so different from results obtained by other hard working businessmen who have effectively applied their brains and brawn. It is certainly a better than average performance, but how it was done should interest the many who face similar competitive conditions and feel some satisfaction in holding their own against the large operators.

In the first place, Jim Gilleland takes advantage of every opportunity to publicize his business. His men, whether on service or delivering fueloil are all salesmen. He converted one of his truck drivers to a full time salesman, who makes a specialty of contractors, realtors and new residents. At the same time, old residents are not overlooked.

One-half cent per gallon of his throughput is budgeted for advertising, including radio, newspapers and bus posters. He utilizes all of the dealer co-operation offered by Shell, such as direct mail, calendars, matches, handy oil and lighter fluid. Decals, with his name and phone number have been found most effective.

Drivers receive incentives for obtaining new accounts, but the most enthusiastic booster of Gilleland products and service is Jim Gilleland, himself, with his ever ready smile.

He is not just a paying member of the OHI of Washington—he is an active member. He and his men have taken part in the training school program. It required considerable time for him to be president of the Oil Heat Dealers Credit Association. When the Washington Oil Information Committee put on a drive for the collection of coat hangers for the benefit of Seattle Children's Home, Gilleland's trucks were leaders.

But Gilleland does not confine himself to working in the oil industry. Among other associations which he has found both pleasant and profitable are: Program chairman and past-president of the Bellevue Lions Club; chairman of the blood bank established by 23 Lions Clubs in Kings County; member and former director of the Bellevue Chamber of Commerce; director of Bellevue Boys Club. He helped establish the Little League in Bellevue, and sponsors the Gilleland Oilers, a championship team in the Babe Ruth League, for boys from 13 to 15 years of age.

Working with other businessmen, Gilleland was instrumental in developing a zoning plan for Bellevue which won an all-America award. Other city problems have received his assistance.

As a director of the Overlake Golf and Country Club, he combines his interest in golf with civic betterment.

Discussing the future possibilities of the Gilleland Oil Company, Jim remarked that some heating oil distributors have the idea that a lot of hard work does not pay off. He did not express his opinion, but it is evident that any slowing down would not be consistent with his manner of doing business.

A one-man public relations department requires a lot of time and effort, is fun, keeps one young, helps the community, and pays dividends in business. Everything points to the continued growth for Gilleland Oil Co.

Jack Massey works in both sales and service departments for Gilleland Oil Co. He's also active in the local OHI burner service school. The Volkswagen service truck shown here is painted attractively in Shell Oil's identifying colors.

Twelve Years new

This Degree-Day Recorder is designed to provide a constant "K-Factor" Reading

by Elmo D. Hidy*

THIS FALL MARKS the twelfth year of commercial manufacture of the Hidy Degree-Day Recorder (some of you may know it as the Tokheim recorder as they formerly manufactured it). You might wonder why we chose the title "Twelve Years New." Well, the reason for that is that the principle involved still is the newest as far as a patented recorder is concerned, to the best of our knowledge, and has proven in use that it takes in all measurable elements that affect an accurate degree-day count.

Over the 12 year period we have seen all kinds of variations of the degree-day system and we would like to pass some of these experiences on to you. Also for those not familiar with the system, a little later on in this article we will try to tell you how it works.

At Arrow Petroleum we started the degree-day system in 1944 and, at that time, used Weather Bureau figures which are officially made by taking the high and low temperature between 12 midnight and 12 midnight, averaging it and subtracting the resultant figure from 65° to get the official degree-day count. Our experience showed us we could get a constant K-Factor, or burning rate, only when the weather was relatively cold, and when the difference between the high and low temperature varied only slightly.

Now, let us point out in capital letters—the only thing you as a fuel-oil dealer want is a constant K-Factor. How you get it is unimportant as long as the effort involved isn't too difficult. If you could get it by wearing a Buck Rogers hat and walking around your establishment in that it's fine, but we doubt if you could get a good K-Factor that way.

The tabulation shows the difference in the degree-day count and resultant K-Factor. Comparing the Weather Bureau degree-day count and the degree-day count from the Hidy Degree-Day Recorder, you will note in the cold weather that the degree-day count from the Weather Bureau figures produces a constant K-Factor, but in spring and fall the K-Factor varies. You will notice, likewise, that the K-Factor produced from the figures from the Hidy Degree-Day Recorder is constant all year long. Ninety percent of your customers should run a near constant K-Factor. By that we mean not having a variance of more than 1/10 or 2/10 of a point if you get a degree-day count the equivalent to the Hidy Degree-Day Recorder.

You can't do anything about the few that do vary more than that because it is then not the fault of the degree-day count, but the fault of the customer himself. He doesn't live at a near constant pattern and won't keep his cotton pickin' hands off his thermostat. So with him you just have to go a little more often to keep him from running out.

Speaking of run-outs, the dealer who never has one is probably not making as economical deliveries as he should. The reserve you leave in a tank should normally be about 20%. If you try to leave less than that the customer worries and, in turn, worries you. But if Grandma came to live with your customer and the house temperature is raised, say 10°, then the customer should run out if he hasn't let you know of the change in the house temperature. Likewise, if the customer added another room and you are not told about it, he should be a potential run-out.

The convenience of the Recorder, in addition to the accuracy, should be considered as it is on duty 24 hours a day, seven days a week, all year long. It eliminates the chance of human error. Even if you're a junior Einstein, if you add 2 plus 2 long enough, some day it will come out 3 instead of 5.

Elmo D. Hidy, who discusses the application of his Hidy Degree-Day Recorder in the accompanying article, is an official of the firm which makes the instrument. Of more interest, though, is the fact that he operates a Texaco fueloil distributorship and thus speaks about "K-Factor" problems from experience.

*President, Arrow Petroleum Co., Cincinnati, Ohio.

Incidentally, if you have a power failure, the Hidy Degree-Day Recorder has a red flag that shows the power is off, and for how long, so you can readily compensate for any lost degree-days. The degree-day count is accurate for your delivery area, not some distant weather station.

What Kind of System

We are frequently asked "What kind of system should we run. Do we need a machine or any other equipment." For the relatively small dealer who is taking care of 100 to 1,000 customers, a simple, vertical alphabetical and degree-day file is all that is actually needed. From there on out additional machines can be used, provided the direct labor savings justify the investment. If you can save only a half hour a day of $1.50 per hour girl, and there are only 190 working days in a heating season, you can save only $144 per year. If you want a three year return on invested capital, you could afford a $432 machine, and there are not many available.

At Arrow Petroleum we use a Kardex alphabetical file and then use an Addressograph plate keyed for tank size, geographical location and K-Factor, which we file by degree-days. Then when the customer comes up for a filling, the delivery ticket heading is done by Addressograph. The ticket first goes to the credit department for an O.K. and then is handed to the driver. Everyone can read it and an extra copy serves as an invoice for the customer.

For those not on a degree-day system, briefly the system works like this. A degree-day is a measurement of time and temperature below 65°. The degree-day recorder keeps a continuous count of these degree-days as they occur. To put a customer on the system, go out and fill up the customer and record the degree-days at the time of that filling. Then let some degree-days go by and fill him up again.

If, for example, 400 degree-days went by and you put 150 gallons in the customer's tank, you would divide the gallons used into the degree-days and you then come out with a burning rate or K-Factor, which in this case is 2.7. This means the customer will burn 1 gallon of fueloil every 2.7 degree-days. If the customer had a 275 gallon tank and you wanted to deliver 200 gallons each time you went to his tank, then multiply 200 times his K-Factor, or 2.7 in this case, and every 540 degree-days he would use 200 gallons.

We recommend the use of an alphabetical card where each delivery record shows the date, the gallons delivered, percentage in the tank, the degree-days of this delivery and the degree-days of the anticipated delivery. In the case we spoke of above, to get the degree-days of the anticipated delivery you add 540 degree-days to the degree-days of the current delivery.

The customer's name, a symbol that indicates geographical location, the gallons to be delivered, and the degree-day total at which the next delivery is to be made are placed on another card which is filed by degree-days. This card usually contains all the names that come in a given 100 degree-days. For example, the 1000 degree-days would hold all the names between 1000 and 1099. When 1000 comes up on the Recorder, the card is pulled and all deliveries for the next 100 degree-days are ready to be dispatched.

Comparison of burning Rate (or "K" Factor)

obtained with the Hidy Degree-Day Recorder and Weather Bureau Figures*

Date		Gallons in Tank	Gallons Used	–Hidy Recorder– Degree-Days	"K-Factor"	–Weather Bureau– Degree-Days	"K-Factor"
Sept 21	420	420	Start	0	0	0	0
Oct 5		390	30	100	3.1	62	2.1
Oct 9		370	50	156	3.1	93	1.8
Oct 15		350	70	222	3.1	137	1.9
Oct 20		320	100	310	3.1	213	2.1
Oct 25		290	130	397	3.1	285	2.2
Nov 1		260	160	495	3.1	360	2.2
Nov 8		245	175	556	3.1	406	2.3
Nov 12		220	200	625	3.1	473	2.3
Nov 16		195	225	712	3.1	544	2.4
Nov 22		160	260	812	3.1	633	2.4
Nov 28		120	300	948	3.1	756	2.5
Nov 30		100	320	1017	3.1	808	2.5
Dec 1		90	330	1042	3.1	830	2.5
	400						
Added	820	490					
Dec 3		478	342	1092	3.1	866	2.5
Dec 6		455	365	1158	3.1	923	2.5
Dec 9		430	390	1242	3.1	1004	2.6
Dec 11		405	415	1314	3.1	1075	2.6
Dec 13		388	432	1350	3.1	1094	2.5
Dec 16		375	445	1378	3.1	1120	2.5
Dec 22		320	500	1550	3.1	1268	2.5
Dec 25		290	530	1650	3.1	1384	2.6
Dec 28		245	575	1770	3.1	1496	2.6
Jan 2		190	630	1940	3.1	1649	2.6
Jan 4		170	650	2000	3.1	1689	2.6
Jan 12		112	708	2164	3.1	1848	2.6
Jan 13		100	720	2199	3.1	1878	2.6
	440						
Added	1260	540					
Jan 15		530	730	2253	3.1	1918	2.6
Jan 19		500	760	2338	3.1	2002	2.6
Jan 26		440	820	2530	3.1	2163	2.6
Jan 31		375	875	2712	3.1	2343	2.6
Feb 7		305	955	2930	3.1	2562	2.6
Feb 11		270	1000	3055	3.1	2662	2.6
Feb 23		180	1080	3300	3.1	2870	2.6
Mar 1		125	1135	3472	3.1	3043	2.6
Mar 4		90	1170	3566	3.1	3104	2.6
	450						
Added	1710	540					
Mar 9		505	1205	3670	3.1	3198	2.6
Mar 15		445	1265	3862	3.1	3387	2.7
Mar 24		370	1340	4088	3.1	3571	2.7
Apr 1		355	1355	4164	3.1	3634	2.7
May 2		210	1500	4573	3.1	3932	2.6
May 23		195	1515	4638	3.1	3955	2.6
May 31		180	1530	4691	3.1		2.6

*Residence: E.D.H.; house temperature 72°.

Selling by cost Comparisons

Commercial conversion Sales favor Oil when operating cost Analysis is made

by Frank Wymbs, Jr.*

THE COMMERCIAL oilburner installation, especially in the moderate range, is in a very favorable position in certain areas of the country in relation to gas competition because of the economies it has to offer over long or short range operating periods. The fact that this burner uses #4 or #5 oil, which has a decided price advantage not only over gas but also over #2 oil, gives it a running start in the battle of the competitive fuels.

The use of the sales approach of the reduced operating cost of one fuel over the other can be applied in two ways. This can be

(1) To make an extended operating cost analysis for a period of six months or a year and present it to the prospect with some type of guarantee that the performance as indicated in the analysis will be attained or close thereto, or

(2) Encourage the prospect to make his own analysis in those cases where the figures are bound to support the economies of oil over the competition.

How ever the sale is achieved, it is even more important that the result of the sale should be used as basis for further promotional efforts.

To the businessman, one of the foremost of these features is economy. Figures No. 1 and No. 2 demonstrate how this applies in the metropolitan area of New York. In this City and in its suburbs, fueloil has a distinct price advantage, with that offered by Nos. 4 and 5 oils being exceptionally noteworthy.

Figure No. 2 shows that for a basic sum of $6 in the New York area, 9,000,000 Btu's of heat can be purchased if the fuel is #4 or #5 oil; 6,100,000 Btu's if the fuel is #2 oil, as compared with 2½ million Btu's bought from utility company "B" and 2¼ million Btu's if gas is bought from company "A."

How much more of an effective sales argument can there be? For the same expenditure with #4 or #5 oil 9 million Btu's can be bought as against 2½ million if the fuel is gas. This fact can lay concealed under the proverbial "bushel basket," and is only effective insofar as it is promoted. Every individual case of this sort is a basis for specific promotion.

A testimonial letter received by Hev-E-Oil certifies that Sterling Cafeteria with the installation of two oilburners using No. 5 oil was able to effect a saving of $1,500 over a seven month period. This was a direct saving represented by the lower operational cost of oil as compared with gas. A testimonial letter such as this can open thousands of doors if thousands of gas users get to read it.

An advertisement run by The Better Heat With Oil Council of New York City made full use of this letter which had been mailed to the burner distributor. Every oil company or burner distributor should make the testimonials he receives available for the general benefit of oilheating as a whole.

This advertisement, run in local newspapers, not only quoted from the letter but also had a picture of the man who is the owner of the Sterling Cafeteria, the buyer of the burner.

An advertisement of this sort is strong, effective and factual. Many

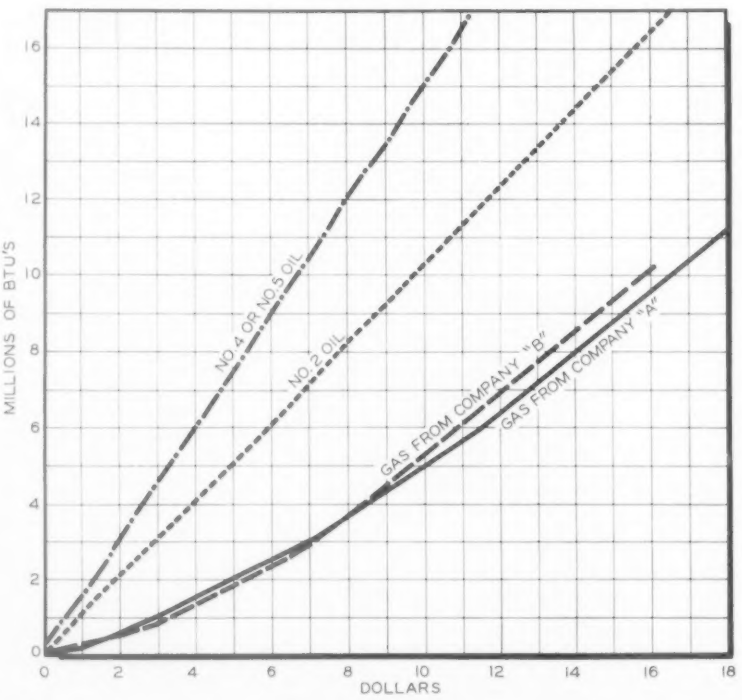


Figure 1. Comparison of Btu quantities purchased for different fuels. The big saving to be obtained by using #4 or #5 oil is shown here; #2 oil also enjoys an edge.

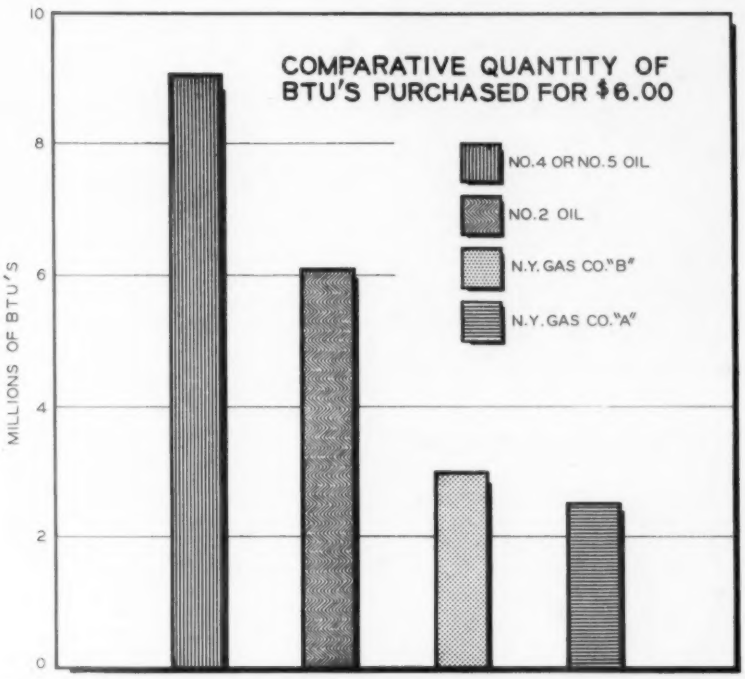


Figure 2. All conditions being equal, $6 will buy a lot more heat when oil is the fuel. The graph demonstrates the economic advantage of oil in metropolitan New York.

businessmen who see a statement like this cannot help but pause and consider. In this case, the operational cost saving was effectively used not only by the individual burner distributor but by the local oilheating organization.

An example of what can be done by encouraging the prospective customers to make an independent cost analysis of the comparative operational expenses of one fuel versus the other is demonstrated by the experience with an organization operating a number of movie houses.

The Associated Independent Theater chain operates a considerable number of theaters on Long Island. Disturbed by the high costs of heating some of these theaters, the management was encouraged by the burner distributor to make an independent cost analysis. The result of this analysis resulted in the immediate conversion of the theater from gas to an oilburner using #5 heating oil. It also had one other startling result; the chain now has installed ten such oilburners on Long Island and obviously will not have a single theater heated by gas by the time the project is over.

A letter signed by the president of this company contains language which from the promotional and sales closing aspect is invaluable. It states that the cost of gas heating of the theaters "is fantastically higher than heating by oil." The letter carries this to the logical conclusion, stating that the operational cost differential influenced the decision to replace all the remaining heating units before the start of the new heating season. Note, that no time was lost.

The examples above of the two methods of approach; (1) by providing the operational cost comparison and (2) by having the prospect make his own independent analysis both were very effective, not only in selling the oilburner installation and replacing gas, but in securing factual letters from the owners of the businesses, telling why they chose to convert to oil. This was carried further to benefit the entire industry by providing testimonial type advertising used in the local promotional campaign for the entire Metropolitan New York area.

A lesson can be learned from this. Conversions replacing gas with oil equipment can be made and can be made in quantity, if the facts are told and the customer can be persuaded to present the facts in letters or other types of statements.

In every sale, there is the seed of another sale. Nurturing this seed and seeing that it develops and spreads is the basis of future continual conversions from gas to oil.

"Gas...? Fantastically higher than Oil Heat!"
says Mr. Samuel Baker
President of Associated Independent Theatres, Inc.
"While the majority of the theatres in our chain are oil heated, several are now using gas. However, a recent cost analysis made by us clearly indicates that gas heat is fantastically higher than heating with oil. This higher cost differential has influenced us to replace all remaining gas heating units with Oil Heat before the start of the new heating season."
Time's short, but you can still beat the heating season, too, and save with low-cost Oil Heat. Just write—or even better, call Better Heat With Oil Council for information.
Little Bill
Better Heat with Oil Council
1220 Broadway, New York 1 • LO 3-5146

Figure 3. An example of gas to oil conversion activity benefiting an entire segment of the industry. This advertisement was used by the Better Heat with Oil Council, New York, highlighting the Associated Independent Theatres plus a testimonial.

Teen-age for oilheating

CULMINATING the nine year program of the Petroleum Educational Commission are the two oilburner shops in New York City schools pictured here.

On the left hand page is shown the shop at the Thomas A. Edison Vocational High School, Jamaica, N. Y.; the right hand page contains views of the shop at the Wm. E. Grady Vocational High School, Brooklyn, N. Y.

Both shops are unique in that they are believed to be the first in the country which were designed and worked into the plans of these new schools from the very beginning. Wm. E. Grady school opened a little more than a year ago; the Edison school was dedicated last September.

Courses in automatic oilheating in these schools—along with a third in the Samuel Gompers Vocational High School, Bronx, N. Y., conducted in a shop added to an existing school—were organized by the oil industry through the Advisory Board for Vocational and Extension Education, New York City Board of Education.

Thomas A. Edison: In the lower picture Instructor George Gordon confers with students in the automatic oilheating class. In classroom (shop) instruction the boys work on combustion chambers, vacuum clean boilers and learn the elements of pipefitting. A recent addition to the shop equipment is the combination heating cooling unit shown above.

Training Careers

Wm. E. Grady: An over-all view of the oilburner shop where Thomas Stefanelli instructs the students in automatic heating. Below is a corner of the controls shop with instructer Murray Eddis demonstrating how an oilburner fires. In the upper right he explains another control cycle. The other pictures to the right show a student becoming familiar with oilburner adjustments and working on a classroom fuel unit set-up. The three year course covers a term of pipe fitting, a term of ductwork and a year each on controls and automatic oilheating.

Two Kinds of fuel Units

Two-stage Pumps better than single-stage Pumps—only where return Lines are used

by John W. Schulz

PRESSURE BURNERS, or high-pressure atomizing gun-type oilburners, started gaining their present popularity early in the history of the fueloil and oil heat industry—in the late 1920's when large numbers of automatic, house-heating burners first were installed.

As early as 1932, the pressure burner was the favorite type burner of the industry. In that year, the magazine *Fueloil Journal* published specification details of 179 domestic burners made in the United States. These used widely different methods for preparing fueloil for combustion — thirteen methods all told, including the "oil pressure at nozzle method" of pressure burners.

Illustrative of the popularity gained by pressure burners as early as 1932, of the 179 burners listed in *Fueloil Journal* that year, 97 were pressure burners.

The typical, pressure burner of the late 1920's had oil-handling parts of a certain pattern. It had a gear-type oil pump, which was belt driven at slow speed, and which had a packed stuffing-box to prevent fueloil from leaking out along its drive shaft. It had a separate feed-line oil strainer, piped to the pump's input connection. It had two automatic oil valves, one for pressure regulation, and the other for shutting off the nozzle line when the burner was idle; this second automatic valve was the nozzle-line shut-off valve.

Improvements in this earliest form of pressure burner came as a result of the popularity of this type burner. Then as a result of the improvements, the pressure burner became still more popular.

An early, significant improvement was in the use of a direct-drive pump (pump drive-shaft driven at motor speed) instead of the belt-drive pump. This gained compactness for pressure burners, eliminated the cost of belts and pulley wheels, and ended service problems of adjusting belt tension and replacing worn-out belts.

Another early improvement in pressure burners was the substitution of metal-to-metal shaft glands for the old, troublesome, packed glands. This eliminated the work of giving attention to pump-shaft packing—"taking up on it" and replacing it; also, it reduced greatly the maximum loads on burner motors, and leveled the motor loads.

The appearance of the first "fuel unit" was a milestone along the path of the development of pressure burners. Compact and ultra-modern when it first appeared, the fuel unit contained all the oil-handling parts needed in a pressure burner, except of course the atomizing nozzle. It contained all the oil-handling parts in Diag. 1—the strainer, oil pump, and combination pressure-regulating valve and shut-off valve.

Diag. 1 contains one oil pump, which at the same time develops the vacuum needed to lift oil from the outside, buried, oil tank the diagram shows, and develops the 100 lb. pressure for the 2.0 gph nozzle.

The first fuel unit contained just one oil pump. Later it gained the name of single-stage fuel unit.

Another milestone in the history of pressure burners marked the appearance of the two-stage fuel unit. Full appreciation and understanding of this can be gained through studies of Diags. 1 and 2.

Burner dealers, salesmen, installers, and servicemen should know all the details of how the two-stage fuel unit works in comparison with the single-stage fuel unit. The two-stage fuel unit works wonders—on certain installations. But the advantages of the two-stage unit over the single-stage unit are not realized, for example, on an installation which has no return line that goes back to the oil tank. A study of the accompanying drawings helps bring full realization of the preceding points, and additional pertinent points.

The dual purpose valve in Diag. 1 actually works as two valves. With the burner idle, it works as a nozzle-line shut-off valve. Serving this purpose, the valve must close dead-tight (see the valve pin and its valve seat in the bottom of the valve). If the valve did not close dead-tight in serving as a nozzle-line shut-off valve, oil would drip from the nozzle with the burner idle.

With the burner running, the dual purpose valve in Diag. 1 serves as a pressure regulating valve. The piston in the drawing automatically moves high enough (after the nozzle-line shut-off valve has opened fully) to uncover to the proper degree a side, outlet port in the cylindrical part of the valve—the valve body. The result is that this valve serves the function of regulating the nozzle pressure, which can be 100 lbs. or somewhat higher according to the degree of spring tension provided by the adjustment screw in the drawing.

The pressure regulating portion of the dual purpose valve, in Diag. 1, does not close dead-tight with the burner idle. With the piston in its lowest position (nozzle-line shut-off valve therefore tight-closed), a small passage is open between the lower chamber of the valve, located below the piston, and the return line. The return line is marked 18 gph in Diag. 1.

Two advantages are gained by this failure of the pressure regulating valve to close dead-tight with the burner idle, or with the pump developing little or no pressure.

First advantage: When the burner motor starts slowing down, during normal stopping of the burner, at once the gph output of the oil pump starts dropping. The piston of the dual purpose valve moves downward, tending to decrease the flow of oil to the return line. Were there no "leak" in the pressure regulating parts of the

valve, the flow of oil to the return line would be stopped entirely before closing of the nozzle-line shut-off valve, and this valve would close slowly, instead of in the snappy fashion that gives desirable, fast, cut-off of oil to the nozzle.

Because of the "leak" in the pressure regulator valve, then, the action of the shut-off valve is more rapid during a burner shutdown—than it would be without the "leak."

A second Advantage

Second advantage of failure of the shut-off valve to close dead-tight with the pump developing little or no pressure: If the pump momentarily is developing less pressure than it should, because air from suction-line leaks goes to the pump, the piston of the dual purpose valve drops in position, tending to block the flow of air and oil from the pump to the return line.

If the flow from the pump to the return line were stopped entirely by the valve parts regulating the pump pressure, then air coming from the pump could escape from the fuel unit only by traveling to and through the atomizing nozzle. That would not be desirable. The oil flame would tend to go out because of air coming from the nozzle, alone or accompanied by fuel-oil. The oil pump would tend to become air-bound, and its pressure would tend to drop still further, because the fuel unit could get rid of air only slowly by sending it through the extremely small atomizing slots and the orifice of the nozzle.

Thus a passage of a certain, small size is always open, in Diag. 1, from the output side of the oil pump to the return line. This passage is open even with the piston of the dual purpose valve in its lowest position because the burner motor and pump are idle, or because the pump is air-bound with the motor running, and therefore the pump develops little or no pressure.

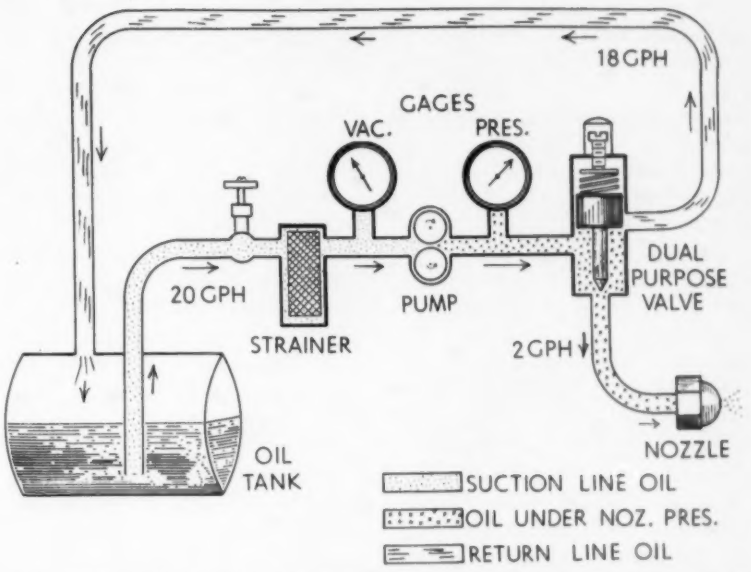
Because of the "leak" in the pressure regulator valve in Diag. 1, a fuel unit tends to try to air-rid itself during an attempted start-up after it has run out of oil, then has had the advantage of an oil delivery.

During such an attempted start-up, the oil pump in Diag. 1 obtains air from the suction line, which received air from the oil tank when the installation ran out of oil. The pump emits air when a homeowner or serviceman tries starting the burner. Handling air, the pump cannot develop enough pressure to open the nozzle-line port or the return-line port of the dual purpose valve. If air could not escape form this valve through its "leak" to the return line, the pump could not rid itself of air. But because there is a "leak" to the return line with the dual purpose valve in its entirely closed position (no pump pressure raising the valve's piston), the pump may be able to air-rid itself under these conditions.

Servicemen who work on pressure burners quickly learn a highly important characteristic of such an oil pump as appears in Diag. 1. They learn that when the pump and its suction line contain considerable air, because a new installation is being started for the first time or an old installation has run out of oil, the best way to make the pump work properly in a hurry is to let it rid itself of air. Or, to word things differently, a serviceman air-rids a pump.

To air-rid the pump in Diag. 1 most speedily, a serviceman would remove the pressure gage. He'd put a can or a rag under the pressure gage opening to catch fueloil that will escape. He'd turn on the burner motor. If the pump gears are at all wet with fueloil (because the serviceman primed them, or because the installation simply ran out of oil) in a minute or two the pump will expel all the air that was in it and the suction line, and out of the pressure gage port will come 100% fueloil, no more air. Then the serviceman stops the burner, plugs the pressure gage opening, and turns on the burner with it rid of suction-line air and ready for normal firing.

The routine use of this procedure for ridding a pressure burner of air brings out this highly important point: Although a gear-type oil pump cannot handle suction-line air very well when at the same time it is trying to develop pressure on its output side, such a pump handles air very well when it is not trying to develop any pressure.



Diag. 1—Schematic drawing of the complete oil-handling system of an outside-tank installation on which a single-stage fuel unit is used. Manufactured for the entire fueloil and oil heat industry by only a few companies which are specialists, modern fuel units for pressure burners are highly developed. They are compact, dependable, quiet, long-lasting, and remarkably troublefree. An inside-tank installation of the usual pattern, with the oil tank fairly close to the burner and most of the stored oil at a level above the fuel unit, needs only the simple single-stage oil-handling equipment shown in this drawing. That is, such an installation gains nothing through the use of a two-stage fuel unit. It can be improved, however, by the addition of a modern, highly effective, feed-line oil filter . . . and a delayed-opening solenoid oil valve for its nozzle line.

To air-rid a simple oil pump, of the single-stage type shown in Diag. 1, you simply set things up so that the pump does not have to develop any pressure. You let the air escape freely from the pump, right to the atmosphere. Working that way, the pump quickly expels any air that comes to it from the suction line.

The preceding ideas give a two-stage fuel unit, shown schematically in Diag. 2, its great advantage.

In Diag. 2, the No. 1 oil pump never works against appreciable pressure. Hence at all times it has the same advantage as is gained by the pump in Diag. 1 by removing the pressure gage at the output side of this pump.

The No. 1 pump in Diag. 2 is in a condition to air-rid itself at all times, with the burner in normal operation. This No. 1 pump can handle appreciable air. It will keep on working, bringing oil to the burner, though it obtains air (from suction-line leaks) in amounts that would cause great trouble, air-binding and ending of pumping, with the equipment shown in Diag. 1.

Air bubbles are shown in the suction line in Diag. 2. The pump can handle them, as it develops no pressure. Notice that in the reservoir these air bubbles rise and at once go out of the fuel unit through its return line port, then through the return line and out to the oil tank.

The No. 2 pump develops nozzle pressure. It never has to develop any vacuum, for it obtains its oil from the reservoir . . . which is kept full of oil by the first pump. The No. 2 pump will not handle air, even though the first pump is handling appreciable air (enough air to stop the action of the second pump, if it reached this pump).

Outside tank installations, which are equipped with the return lines that such installations need and should have, gain these advantages from the use of two-stage fuel units:

1. They will not be adversely affected by slight, suction-line, air leaks, which would cause single-stage fuel units to give trouble. Suction-line air will be handled only by the No. 1 pump, the "suction pump," which has higher gph capacity than the No. 2 pump, the "pressure pump." On some installations having two-stage fuel units, burner operation continues satisfactory although suction-line leaks are so bad that the No. 1 pump receives much air, together with fueloil at a gph rate only slightly greater than the gph rate of the nozzle.

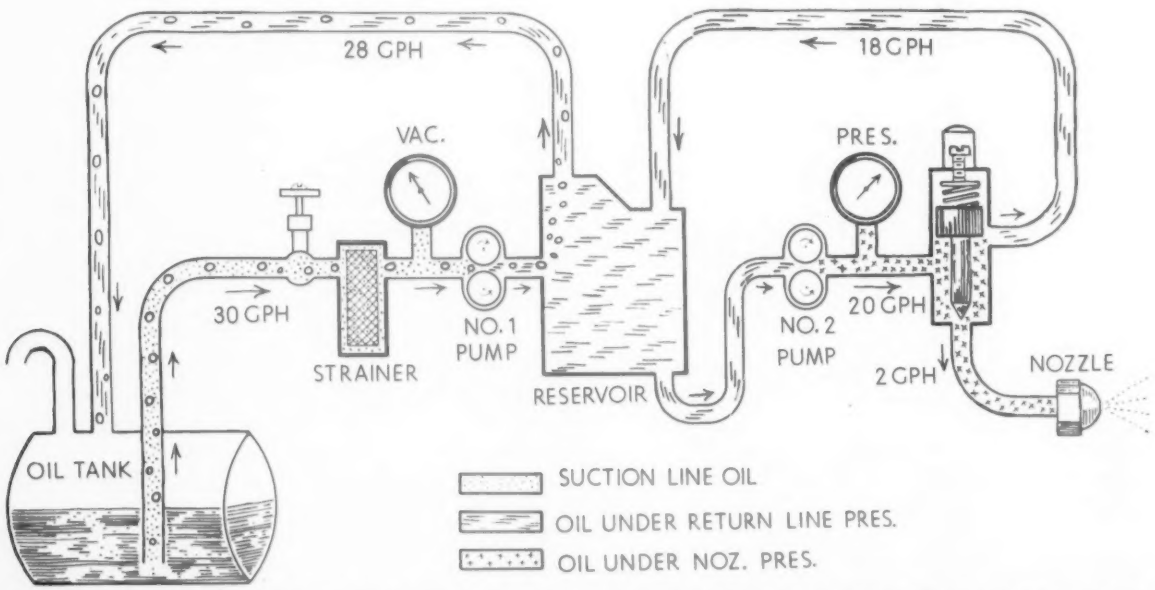
2. The two-stage fuel unit will serve dependably and satisfactorily where, for any reason, the suction-line vacuum is unusually and undesirably high.

3. The two-stage fuel unit needs little or no air-ridding. After it runs out of oil because the tank goes dry, it probably will air-rid itself if the owner presses the "safety re-set" device a few times.

If you set up a two-stage fuel unit for one-line or one-pipe operation (no return line to the oil tank), you won't gain these advantages. A study of Diag. 2 shows why a return line is needed to gain the extra advantages in a two-stage fuel unit. The return line is needed to permit the first pump to air-rid itself . . . to permit this pump to send air out of the fuel unit, out to the oil tank.

If you don't use a return line for a two-stage fuel unit, you use the internal "by-pass" of the unit. Doing that for the set-up in Diag. 2 would simply send the 28 gph of oil, shown coming out of the left-hand, top of the reservoir, back into the input side of pump No. 1. That would cause suction-line air, entering pump No. 1, to go round-and-round through the circuit of this pump.

That's why a two-stage fuel unit needs a return line. Without a return line, such a fuel unit has no advantages over a single-stage fuel unit.



Diag. 2—As this drawing shows, the No. 1 pump in a two-stage fuel unit works against no pressure. Or, to be 100% precise, the pressure this No. 1 pump works against equals only the slight pressure needed to send the returned oil back to the oil tank through the suction line. That return-line pressure is negligible on actual, typical installations.

Old Paper is worth Money

Those old Files, kept because "You may need Them sometime," may be mighty expensive

by Paul J. Spiewak

THE MANAGER showed me his magnificent records room, occupying three quarters of his 14 ft. high basement. Among other things, he bragged about the completeness of his old files. "Do you know I've got every delivery ticket in here, since the company started business in 1919?" His arm swept over a 40 x 100 area packed with transfer type files from floor to ceiling. I, jokingly—or so I thought, asked him what would happen if a customer asked for a copy of an August 1925 bill. Immediate assurance arrived. "Oh, we've got duplicates filed here too. That's no problem at all."

A few minutes of calculation showed that he had enough old delivery tickets to make 271 stacks as high as the Empire State Building. If laid flat, these old tickets could make a path one foot wide from Moscow to San Francisco.

If you think this is an extreme case, and maybe it is, consider a few statistics.

A recent survey showed that 95% of all business records in the United States, over one year old, are never used again!

In the average American business, 30% of all records can be destroyed immediately, and another 50% should be destroyed during the next 12 months.

95% of all records used are less than 5 years old.

Four Kinds of Records

There are essentially four kinds of records:

1. Vital—Cannot be recreated, such as: stock transfers, deeds, corporation books, and minutes.
2. Important—Expensive to recreate and used in daily operation or necessary for tax purposes.
3. Useful — Easily recreated, and usually worthless after 3 years.
4. Non-essential — Little practical value and should be destroyed immediately after use.

How you classify various records is the concern of your attorney and yourself. There is, for example, little point in preserving delivery tickets beyond one year. The same information is available from accounts receivable ledgers.

For much the same reasons, old delivery cards and driver delivery sheets aren't important either. Service tickets fall into the same category. Installation proposals are generally outdated in three to six months. Correspondence is largely in the same classification. Paid bills, for other than tax purposes, have little value after a year.

Records Retention

From a reasonable point of view, nobody expects you to go flying through your files, throwing papers away left and right, but consider each type of record carefully. One well known, medium size, corporation recently instituted a regular records retention plan. It was dictated by necessity. Filing space had just run out. Inside of three months, this company had sold 16 truck loads of scrap paper and released 5,000 filing drawers.

The American language has some interesting peculiarities. After all is said and done, a filing system is not a filing system at all. It is a finding system, or at least it should be. Things are always found in the last place we look. Naturally, because we stop looking as soon as they're found. "Clean files" make for easier finding. Each extra file drawer costs approximately $20 a year to maintain if we calculate space and transfer costs.

To make things easier, list all the different types of records and/or forms you use and include those received from outside sources as well. Next to each one mark the estimated useful life. Next, note other places the same information is available. Reestimate the useful life. Check with your attorney to make sure essential records are kept for the proper periods. When you have made your final decisions, dispose of what you can immediately. Review your list at regular intervals and check to make sure disposals are being carried out.

This procedure will save you space, time, and money. It will enable you to work in a "clean shop" and will help you find the things you really need quickly and easily. In short, it makes for a better operation. A better operation means a better profit.

Elliott, Chairman of Convention, releases Program for OHI Meeting

EVERETT ELLIOTT, chairman for the 38th annual convention of the Oil-Heat Institute of America, scheduled for the week of April 4, 1960 in New York City, has revealed details of a preliminary program prepared for the affair.

Elliott, who is president of C. L. Elliott Co., Danvers, Mass., a member of Oil Heat Institute of New England and vice-chairman for the East for OHI's Distribution Division, is working with these committee members: C. W. Lang, Sundstrand Hydraulic, Rockford, Ill.; Larry D. Sibley, Combustion Control Division, Cambridge, Mass.; M. J. Reed, Socony Mobil, New York; Gabe M. Marin, Sun-Ray Mfg. Co., Jamaica, N. Y.; Lavern Schaetzel, Schaetzel Oil Co., Germantown, Wis.; Corbin B. White, C. B. White & Bros., Inc., Norfolk, Va.; Reginald Moffat, L. L. Johnson Fuel Oil Co., Orlando, Fla.

A feature of convention attractions this year will be the availability of an expected 15 special air and train tours to New York for the Convention and Show, which runs at the same time.

(Please turn to page 128)

Seattle oil distribution Economics

OHI *of Washington Survey looks at financial Condition of local fueloil Marketers*

AN INDUSTRY COST STUDY covering the retail oil heat distribution industry in the Seattle metropolitan market has been completed for the Calendar year of 1958.

It reflects certain specific trends and is alarming in that the "averages" are at their lowest in any of the past ten years—a portion of this decline in profit can be attributed to the warmer weather experienced.

Calendar year "degree-days" for the past five years in this market are:

1954	4605
1955	5280
1956	4723
1957	4266
1958	3563
30 year normal	4460

These are the Federal Office Building weather station tabulations. The Seattle-Tacoma Airport Station is usually some 600 degree-days colder per year, more nearly reflecting actual weather conditions in the residential areas.

The cost studies are based on confidential operating data submitted in sealed envelopes to the office of the OHI of Washington, where they are transmitted unbroken to Professor Guy Gordon at the University of Washington—Professor Gordon makes all of the calculations and when he has completed the particular study, operating statements in sealed envelopes are returned to the owners of the firms who have participated in the study.

Professor Gordon uses a unit of 100 gallons to determine and allocate all costs. This unit of sale makes it possible for a firm doing 500,000 gallons a year to compare his operation with a one-two-three million gallon firm or larger; all elements of costs are present to a degree in every firm.

In the 1958 Calendar year report, 16 firms submitted figures and the total gallonage sold was:

Stove Oil	9,804,000 gals.
Furnace Oil	45,535,000 gals.
Fuel Oils	19,832,000 gals.
Total Sales	75,207,000 gals.

TABLE I

	$ Per 100 Gals. 1957/58		1958		Percentages 1957/58		1958	
Net Sales	$16.75		$16.25		100%		100%	
Cost of Goods Sold	11.80		11.35		71		70	
Gross Margin		4.95		4.90		29%		30%
Expenses								
Selling	.75		.75		4½%		4½%	
Delivery	1.75		1.80		10½%		11%	
Administrative	1.90		1.95		11%		12%	
Total Expense		4.40		9.50		26%		27½%
Operating Profit before taxes		.55		.40		3%		2½%

TABLE II

		Per 100 gallons sold Arithmetic Means Unweighted	Weighted	Median	Selected Averages
Revenues	$11,145,000	$15.70	$15.00	$16.37	$16.25
Cost of Goods	7,906,000	10.96	10.64	11.35	11.35
Gross Margin	3,239,000	4.74	4.36	4.92	4.90
Expense	2,957,000	4.32	3.98	4.53	4.50
Operating profit before Federal tax	$282,000	.42	.38	.39	.40

TABLE III

MEDIANS	Sales		MEDIANS	Cost of Goods	
1	18.12	S & D—L	1	12.27	
2	17.67	S & D—M	2	12.02	
3	17.53	S & D—M	5	11.77	
4	17.49	S & D B—M	4	11.65	
5	17.21	S & D—M	3	11.61	
6	17.21	S & D—M	7	11.63	
7	16.52	D & B—M	6	11.37	
8	16.56	D only—M Median	9	11.36	Median
9	16.27	D only—L	8	11.34	
10	16.04	S & D & B—L	10	11.14	
11	14.59	S & D & B—M	13	10.60	
12	14.62	S & D & B—M	12	10.53	
13	14.45	S & D & B—L	11	10.05	
14	12.73	S & D & B—L	15	9.29	
15	12.65	D & B—L	14	9.40	
16	11.55	D & B—L	16	8.94	

It sould be pointed out that these are medians (mid-points) rounded and adjusted by Profesor Gordon. The use of medians or averages does not give extra weight to the large volume dealer.

TABLE II examines oil sales in this period.

You will note that profits tend to conform regardless of mean used but if only the weighted average had been used the figures would not reflect the levels at which commodities are sold. The selected average is, therefore, the most practical. How are mid-points determined? TABLE III illustrates both sales returns and costs with a median band for each.

The last two studies, 1957/58 fiscal year and 1958 Calendar year, are significant in their disclosure of declining profits because of increased costs. Some improvement is noted in the percentage of gross margin, due to a decline

in costs on the same relative level as the decline in selling price. (TABLE I.)

Now let us examine the individual tables:

	Operating Percentage Ratios
Net Sales	100.0%
Cost of Goods Sold	70.0%
Gross Margin	30.0%
Expenses	
Selling	4.5%
Delivery	11.0%
Administrative	12.0%
Total	27.5%
Operating Profit or (loss)	2.5%

Let us for the moment examine the averages vs. the median for all 16 sellers.

Operating Profit or (loss)

5.9%
5.9
5.5
4.2
4.1
3.8
2.9
2.4 Median
2.3
2.3
2.0
1.6
1.4
.6
(.5)
(2.5%)

What do the dollars per hundred gallons show in this study—

TABLE IV

Condensed Statement of Profit or (Loss)

(Dollars per 100 Gals.)

		SEATTLE AVERAGE
NET SALES		
	Stove Oil	$19.50
	Furnace Oil	16.55
	Fuel Oil	9.50
	Total	$16.25
COST OF GOODS SOLD		
	Stove Oil	$12.70
	Furnace Oil	11.35
	Fuel Oil	7.90
	Total	$11.35
GROSS MARGIN ON SALES		
	Stove Oil	$ 6.80
	Furnace Oil	5.20
	Fuel Oil	1.60
	Total	$ 4.90
EXPENSES		
	Selling	$ .75
	Delivery	1.80
	Administrative	1.95
	Total	$ 4.50
Operating Profit or (loss) before taxes		$ .40

We also ask the dealers to supply data in respect to time and distance traveled in making deliveries. The average miles per 100 gallons delivered on all oils was 1.5 miles. The average hours per 100 gallons delivered on all oils was .24 or ¼ hour, however the individual items show:

Stove Oil	.56 hours per 100 gals.
Furnace Oil	.19 hours per 100 gals.
Fuel Oil	.15 hours per 100 gals.
Average	.24 hours per 100 gals.

In what items are selling expenses concentrated:

SELLING EXPENSE
(Dollars per 100 gals.)

		Average
Advertising	.20	
Entertainment	.03	
Total		.23
Salesmen's Salaries	.39	
Other Sales Commissions	.02	
Salesmen's Car Expense	.07	
Total		.48
Other Sales Expense	.04	.04
		.75

DELIVERY EXPENSE
(Dollars per 100 gals.)

		Average
Gas and Oil	.17	
Tires and Tubes	.02	
Repairs and Maintenance	.18	
Total		.37
Truck Depreciation	.24	
Truck License	.03	
Truck Insurance Premiums	.06	
Truck Driver Communication	.03	
Uniform and Laundry	.02	
Total		.38
Driver Wages	.70	
Driver Welfare Fund	.06	
Total		.76
Accident—Damage Claims, Spills, etc.	.01	
Dispatchers Salary & Expense	.19	
Other	.01	
Total		.21
Bulk Plant		.08
Total Delivery Expense		1.80

ADMINISTRATIVE EXPENSE
(Dollars per 100 gals.)

		Average
Officers Salaries & Bonuses		.57
Office Salaries	.44	
Welfare Office, a/c	.02	
Total		.46
Office Supplies	.09	
Telephone and Telegraph	.09	
Postage	.05	
Total		.23

ADMINISTRATIVE EXPENSE (Cont.)
(Dollars per 100 gals.)

Office Equipment and Repair		.04
Office Equipment Depreciation		.03
Office Travel and Expense		.03
Office Rent or Building Depreciation	.11	
Office Light—Heat—Water	.03	
Total		.14
Office Insurance Premiums		.05
Office Taxes		.10
Contributions and Dues		.03
Legal and Audit		.04
Ind. Insurance (All Employees)	.01	
Payroll Tax	.08	
Total		.09
Credit and Collections	.04	
Bad Debts	.07	
Total		.11
Other	.03	.03
Total Administrative Expense		1.95

Balance Sheet Ratios are widely used as a further guide to the general soundness of a firm or an industry:

	Average
(a) Current Assets/to Current Liabilities	2.6:1
(b) Receivables Turnover Seattle Average or at $11,145,000 of Sales/$2,229,000 are a/c Receivable	5.0
(c) Sales/to Fixed Assets	11.2
(d) Sales/to Total Assets or 11 million sales/to $4¼ million — Total Assets	2.4
(e) Sales/to Investment or 11 million sales/to $2¾ million investment	4.0
(f) Total Assets/to Total Investment or $4,458,000 of total assets/to $2¾ million investment	1.6
(g) Return on Investment Seattle Average	10.4%

One Balance Sheet ratio has been the subject of intensive discussion—frequently you hear of fantastic returns on investment as common in the distribution industry. Before discussing this ratio let us look at two firms from a profit return point of view. If I asked you which business you would rather buy at an equal price say $100,000—and

Firm A lost ($5,000.00) in the last three years

and

Firm B made $45,000.00 in the last three years

Your answer probably would be "You have holes in your head," Firm B is the best buy. But let's examine

these businesses for the past three years.

Year	Profit or (Loss) Firm A	Profit or (Loss) Firm B
1956	($15,000)	$25,000
1957	000	15,000
1958	10,000	5,000
Net 3 year position	($ 5,000)	$45,000

Removing the two loss firms and the two top firms we find the following range:

Median	
21.7	
15.3	
15.3	
12.8	
10.4	Median
10.3	
9.7	
6.1	
3.0	

The 75.8% Return on Investment firm had an Asset/Liability ratio of 1.4:1 so for every $1,000 of current liabilities his assets were only $1,400. Obviously the Return on Investment is distortion of facts. Practically it represents a firm who has depreciated his assets and his return looks inordinate.

But there are other facts in connection with this firm which further confirm that his Return on Investment is not as high as it appears.

Let's examine this firm in relation to the Averages in every category of the industry:

		Firm X
Net Sales	100 %	100 %
Cost of Goods Sold	70.0%	72.0%
Gross Margin	30 %	28 %
Selling	4.5	2.7*
Delivery	11.0	11.6
Administrative	12.0	8.2*
	27.5%	22.5%

*Note—The effects of these low cost factors are discussed below.

Net Operating Profit or (Loss)

Sales		
Stove Oil	$19.50	$19.50
Furnace Oil	16.55	16.78
Fuel Oil	9.50	9.60
Average	$16.25	$14.62
Costs		
Stove Oil	$12.70	$14.91
Furnace Oil	11.35	11.43
Fuel Oil	7.90	7.61
Average	$11.30	$10.53
Gross Margin		
Stove Oil	$ 6.80	$ 4.59
Furnace Oil	5.20	5.35
Fuel Oil	1.60	1.99
Average	$ 4.90	$ 4.09
Expense		
Selling	$ .75	$ .39
Delivery	1.80	1.70
Administrative	1.95	1.20
Total Expense	$ 4.50	$ 3.29
Industry Average (per 100 galons)	.40	.80

What is his truck miles per hours per gallons delivered record?

Truck Mileage	Average	Firm X
Miles per 100 gallons	1.50	1.54
Hours per 100 galls	.24	.23
Stove Oil	.56	.46
Furnace Oil	.19	.17
Fuel Oil	.15	.25
	.24	.23

Now let's see how Firm X spends his money and where he makes his profits. We have assigned this operation 2 million gallons of total product sales.

	INDUSTRY AVERAGE		FIRM X	
Advertising and Entertainment	.23¢ =	$ 4,600*	.10¢ =	$ 2,000*
Salesmen's Salaries, etc.	.48 =	9,600*	.279 =	5,580*
Other	.04 =	800*	.016 =	320*
		$15,000*		$ 7,900*

*Based on 2,000,000 gals. sales.

If Firm X employed sufficient people to be equal to the industry average and spent a proper amount on advertising he would use more than half of the profit shown—

Delivery Expense				
Gas, Oil, etc.	.37¢ =	$ 7,400	.29¢ =	$ 5,800
Truck Costs	.37 =	7,600	.34 =	6,800
Truck Wages	.76 =	15,200	.792 =	15,840
Dispatching	.21 =	4,200	.163 =	3,260
Bulk Plant	.08 =	1,600	.115 =	2,300
	$1.80	$36,000	$1.700	$34,000
Administrative				
Officer Salaries	.57 =	$11,400	.282 =	$ 5,640
Office Salaries	.45 =	9,200	.278 =	5,560
Office Supplies	.23 =	4,600	.168 =	3,360
Office Equipment Travel, etc.	.24 =	4,800	.117 =	2,340
Office Ins. & Taxes	.22 =	4,400	.178 =	3,560
Payroll Taxes	.09 =	1,800	.076 =	1,520
Credit & Collections, Bad Debts	.11 =	2,200	.082 =	1,640
Other	.03 =	600	.016 =	320
	$1.95	$39,000	$11.97	$23,940

*Based on 2,000,000 gals. sales.

The ratio indicates Firm X's total investment on a depreciated basis at the moment is roughly $20,382.

Let us assume this operator must buy two new trucks. If we use $12,000 as an average cost, Firm X's investment now jumps to $44,382. Assuming next year his profits remain the same, the return on his investment drops to 35%.

Professor Cannon who worked very closely with us in starting these studies commented that the nature of the business was such that a firm to enlist risk capital should make at least 40% on investment. Further the industry averages should be 7½ to 8% on sales before taxes.

Remember Firm X's profit is before taxes so he will only have a portion of those funds. The life of a heating oil dealer is not a bed of roses nor is it a clipping of coupons realizing so-called fantastic profits either on sales or investment.

Frequently it has been said that the gross margin in this industry is too high. If we are to make what Prof. Cannon views as proper return on sales before taxes the cost of goods sold would have to decline by 5% on the current study or expressed another way the average return per 100 gallons would rise from $16.25 to $17.10.

This would produce a gross margin on sales of approximately 35%. Examination of other industry studies shows that our delivery cost and administrative costs are well-in-line. Practically the entire industry is low on selling costs. To maintain our present position and secure new business each firm must add to their advertising and sales promotion expense.

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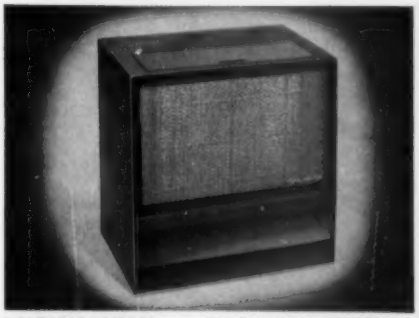

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fuel oil & oil heat

Macomb County, Mich.
OILHEATING MARKET REPORT

THE DETROIT market, despite inroads by natural gas as a competitive househeating fuel, remains important as a sales region for oil heat—especially in its perimeter areas. A study in Macomb County, just north of Detroit, reveals there a well-organized, enthusiastic and progressive group of oilmen, anxious to undertake a constructive promotional activity.

In this market investigation we are concerned chiefly with the southern portion of the county. While the character of the entire county is principally residential, the northern section is sparsely settled—at least 85% of dwelling units and population is concentrated in the southern part. About 95% of all of the oil business in the county is represented here.

While the 1950 census listed 50,955 dwelling units of all types in the county, of which 48,913 were of the one- or two-family variety, we feel that about 90% of these, or 45,860 total dwelling units (44,025 one- and two-family residences) would be about the numbers in our southern, oilheating section.

By the early part of 1958 the number of one- and two-family homes had grown to an estimated 80,718 in this sectional market, among a total of approximately 85,000 dwelling units of all kinds.

Home heating Characteristics

Since we are dealing with a portion (though a major one) of the entire county, statistics for heating usage must also be scaled down, for proper perspective, from 1950 census and other figures.

The 1945 fueloil ration permit records, our earliest available reference, show 2,175 permits throughout the county for central heating, 10,867 for non-central or space heating systems. Since these, assuredly, do not list all installed oilburners in the county, there is not too much point in scaling these back. In the table, however, from the 1950 census and for the start of 1958, we have adjusted to reflect fuel usage in the southern, oilheating market section only—between 85-90% of the full county count.

Besides the residential oilheating users, there are somewhere near 4,000 "small commercial" installations—in stores, laundries, multi-unit dwellings, service stations and the like—using No. 2 fueloil in low-gph, domestic-type burners. The count, then, of all centrally-installed jobs is 36,350, or 7.7% of the state total.

Competitive Fuels and Costs

The principal solid fuel variety in use for househeating is bituminous coal, of fairly high heat value per pound—around 14,000 Btu. It sells here for $25.70 per ton. Figuring usage of such fuel in hand-fired furnaces at an efficiency of 65% (or 81% of the efficiency ascribed to oil or gas units), we arrive at a "comparative" per therm cost for bituminous coal of 11.3¢. A small volume of anthracite coal is used here; this would not reach more than 25% of the overall solid fuel tonnage.

The gas rates for househeating here are the same as in the Plymouth market, reaching a low "step" of 7.6¢ per hundred cubic feet for consumption over 10,000 c.f. per month. Allowing for cooking and water heating usage of this fuel, a typical requirement of 168,000 c.f. (1,680 therms) of gas would cost an average of 9.5¢ per therm. At equal efficiency, this is the equivalent of heat value provided by 1,200 gallons of No. 2 fueloil.

No. 2 fueloil sold in most of this market when this study was made, at 15.6¢ per gallon, No. 1 at 16.6¢. (In and around Mt. Clemens, both grades are posted at .3¢ higher.)

Fueloil Distribution

In this important oilheating section of the country, we estimate that about 50.5 million gallons of No. 2 fueloil are distributed annually. Another 14.7 million gallons of No. 1 fueloil are sold for space heating. Approximately 80% (40.1 million gallons) of the No. 2 grade is delivered to residential heating customers; the balance of 10.4 million gallons to small commercial accounts.

Wholesale supplies of heating oils are brought into the market mostly by the major companies. Independent or local refiners handle the estimated 23% remaining share of wholesale supply.

At the retail level, the major suppliers account for 44% of the tank wagon distribution, on a direct basis. The independent marketers, or dealers, handle 37% of retail sales gallonage. The balance of 19% of the direct-to-user volume is sold by independent companies, who also sell at the wholesale supplier level.

Some 18% of the dealer companies do not depend upon bulk storage facilities of their own; these "yard buyers," loading "under the fill" from other companies' tanks, distribute about 13% of the retail market gallonage.

Automatic deliveries of fueloil are made to approximately 68% of fueloil accounts, and 44% of users' tanks, it is estimated, are equipped with VENTALARM or other audible fill signals. The customers who use budget plan payments number about 15% of all residential users.

One in three fueloil dealer companies handles gasoline. One out of 12 is in the coal business. But only 2% of all fueloil companies sell oilburning equipment.

Market Concentration

There are no dealer operations based in the upper section of the county. In the southern portion, 33 companies, operating a total of 95 delivery trucks, constitute all but two of the 35 local companies known to do business in the area. All 33 firms are members of the market's industry organization. It is believed that in addition to these trucks of the local companies, another 46 "foreign" vehicles come into the county on more or less regular routes, from companies based outside the county.

Though the average number of trucks operated per company works out to just under three, 61% (20) of the dealers are one-or-two-truck operators. But on the hypothetical basis that all operations would get the same annual output per truck, only 31% of the total retail gallonage is distributed by these smaller companies. This slice of the volume is matched by the three largest companies, operating 6, 7 and 16 trucks each, and approximately equalled again, by the ten companies in the three-to-five truck group. Actually, however, because of more efficient delivery procedures, somewhat heavier shares of the total gallonage should be ascribed to the medium and largest companies.

Oilheating equipment Sales

In the Plymouth market, and here in adjacent Macomb County, equipment selling activity by fueloil dealers is less than prevails typically in other midwestern states. Macomb dealers sell no more than 3% of all the jobs put in. Plumbing and heating contractors and dealers and specialized burner service firms control the equipment market, selling 97% of all oilburners.

Oilburner Service

The oil dealers do a bit better in handling 11% of the market's total oilburner maintenance and service load. Also, the local oilmen, five to one, feel that a keener interest among the fueloil resellers is developing toward full equipment servicing.

Service and maintenance contracts are not widely offered. About 12% of homeowners have, however, some sort of contract coverage. An additional one of every three burners receives an annual cleaning or tune-up. So slightly less than half of oilburners get at least minimum maintenance each year.

For the very few service contract plans including parts a charge of $36 to $37.50 prevails. Contracts excepting parts replacement average $19.75. Cleanups are billed for in the neighborhood of $15.35. Fueloil companies who render service charge at rates averaging $5.45 per call. Other, non-fueloil, heating dealers commonly charge at least a dollar more.

Advertising Promotion

Suppliers, individually, are doing some promotion of fueloil and oilheating, though most of the oilmen interviewed felt that the bulk of emphasis ran four to one in favor of the supplier's branded product over the promotion of oil heat.

The independent fueloil dealers engaged more heavily in individual company promotional efforts; about 37% of dealers conduct advertising programs in behalf of their own companies. In this merchandising the average expenditure, per existing fueloil account, figures out at 85¢, or some use a rate of 1% of gross revenue.

Competitive promotion for gas heating has not been too intensive because, no doubt, of restrictions on gas installation. Yet there is a considerable "spill-over" influence from the more extensive gas heat promotion carried on, closer to Detroit, by heating dealers and utility (Michigan Consolidated) alike.

	1950			1958		
Fuel	*Central*	*Non-Central*	*Total*	*Central*	*Non-Central*	*Total*
Coal	14,250	4,150	18,400	5,520	2,070	7,590
Gas	3,500	1,395	4,895	19,710	2,865	22,575
Oil	6,600	11,305	17,905	32,350	13,070	45,420
Other	900	1,750	2,650	3,090	1,355	4,445
Total	25,250	18,600	43,850	60,670	19,360	80,030

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Preheating Problems of No. 6 oil Jobs

Insufficient oil Preheating is causing many large Boilers to use No. 5 oil instead of No. 6; How to correct this?

by Jean L. Dupuis

THE AUTOMATIC, rotary-cup oilburners in many, large boiler rooms are making a poor showing because they are using No. 5 oil, instead of the more economical, No. 6 oil they were intended to use when they were purchased and first installed.

That's bad for oil heat, as is anything that runs up fueloil costs greatly and needlessly. In a certain city just north of metropolitan New York, for example, two rotary-cup burners, each firing about 25 gph, are making their owners unhappy.

Only a few years ago, these two burners were sold and installed for just one purpose: to use No. 6 oil, the most inexpensive fueloil in the city by a wide margin.

Attempts to use No. 6 oil on this installation lead to suction-line vacuum-gage readings above 20". These readings are too high for dependable pumping. Particularly, they are too high for dependable, automatic, unattended start-ups on coldest mornings.

In addition, the No. 6 oil does not atomize well on this installation, because it goes to the atomizing cups at no higher temperature than 125°F. That results in smoke readings of 9, and CO_2 readings below 7%, when an attempt is made to use No. 6 oil.

The No. 5 oil that happens to be available to this burner owner is uncommonly light for this grade of oil; one burner engineer describes it as "more like No. 4 oil than No. 5." It needs no heating at all on this installation. Its price is relatively high for oil of its grade, compensating for the ease of pumping and atomizing it.

The oilburner dealer who planned and sold this installation says that he knew the owner would be influenced greatly by a low bid to install the burner set-up, as the owner was asking many dealers to submit bids.

The wrangling goes on and on, as the owner asserts that the burner dealer should not have indicated he was selling a burner installation capable of using No. 6 oil, if what he was offering could not do well handling and burning the heaviest No. 6 oil delivered by local oil companies.

Installations having automatic burners, intended to use No. 6 oil, become downgraded to No. 5 oil by a series of events that follows one of two patterns.

First pattern: Having completed an installation supposed to use No. 6 oil, the burner dealer says it's best started up on No. 5 oil. In some instances, he employs an overbearing manner to cope with the owner's objections, if this is necessary, and goes over the owner's head in ordering No. 5 oil from the oil company supposed to provide the fueloil for the installation.

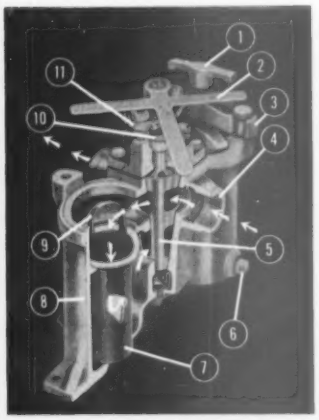
The burner dealer may point out that, after all, only he knows which grade of oil the burner should use for start-up of the new installation. Not experienced with the particular burner, the owner does not know this.

Once the installation has been started and is actually using No. 5 oil, the burner dealer recommends continued use of this grade.

Second pattern by which installations supposed to use No. 6 oil are downgraded to No. 5 oil:

After having gone along for several years using the No. 6 oil it was intended to use, an installation starts giving trouble. This may be caused by its controls, ignition system, motors, or other parts not directly affected by which grade of oil is used. Or, true enough, the oil heaters may not be working properly, or may have become inefficient in a way that decreases their outputs. True enough, instead, perhaps slightly heavier No. 6 oil is being delivered than was delivered in previous years.

KRAISSL CLASS 72 STRAINERS AND FILTERS FOR OIL BURNING SYSTEMS



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6. Drain connections on each basket chamber.
7. Interchangeable low cost baskets.
8. Assembled bodies tested under pressure in accordance with underwriters' specifications.
9. Spring handle holds basket on seat.
10. Independent stuffing box gland.
11. Adjustable locking flange establishes valve clearance.

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- Direct-connected pumps
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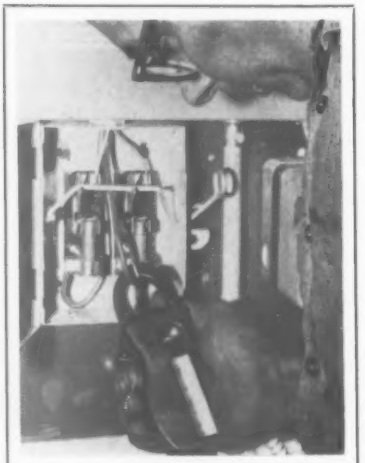
According to this second pattern, the men servicing the installation tell the owner he can end the burner trouble simply and quickly, without great expense for repairs and improvements for his burner equipment. The men servicing the burner recommend that it be switched from No. 6 oil to No. 5 oil, at once and perhaps temporarily just to keep it going. Almost invariably, from then on the burner uses No. 5 oil.

I term this the routine of "downgrading from 6 to 5 to end trouble."

I am strenuously opposed to such downgrading to end trouble. Where an installation that has been working well using No. 6 oil starts giving trouble, I say, the correct steps are to diagnose and end the trouble . . . so that No. 6 oil can be used again as satisfactorily as it was used earlier.

Towards the end of last heating season, an owner of a 70-family apartment house, located on Riverside Drive, New York, explained that the rotary-cup burner providing heat and hot water for the building had been giving more and more trouble. A switch from No. 6 to No. 5 oil had been suggested, as the ten-year-old burner installation was on the verge of not working at all, the owner said.



Before this electrical testing instrument was used widely and regularly by servicemen, Jean Dupuis says, checking the on-off operation of an electric cup-line preheater was a miserable chore. Usually it included climbing down into the pit in which the burner was located, and continuous watching of the thermostat switch of the automatic, electric, oil preheater. Now this checking of the on-off operation of the electric preheater is done "the gentlemen's way," Jean Dupuis says. At the fused main switch of the electric heater (an extremely convenient location to do work and make observations), a snap-on ammeter is snapped over one of the wires providing electricity for the heater. That's done in seconds—no tools needed. Flicking of the ammeter's needle then reports on the heater's turning itself on and off.

COMMERCIAL & INDUSTRIAL oilburning

This burner was doing its everyday work, but barely! It worked, but it came closer to not working than any working burner I had ever seen! On three scores, it was on the verge of not working!

First point: This burner could maintain a fire with the basket removed from its suction-line strainer, but not with the basket in the strainer. All the building superintendent had to do was put the strainer basket properly in place, to strain the suction-line fuel-oil, and the burner would not produce an oil flame!

Second point: Following starting of the burner, it maintained a flame in its firebox as long as the gas-electric ignition system stayed on; but the oil flame went out immediately when the ignition system was turned off. Here was a rotary-cup burner that needed a gas flame to keep its oil flame burning. It would continue running only with "continuous" ignition, but would not continue firing when properly set up for intermittent ignition.

Third point: During a cold night, outside temperature down to about 30°F., the building superintendent had to go down to the boiler room at 2 AM and fire up continuously for an hour and a half. If he didn't do that to warm things up in the middle of the night, according to many sad experiences he knew the burner would not get going by itself in early morning—without help from a serviceman.

Without the basket in the suction-line strainer, the integral oil pump that was part of this burner developed a 22" vacuum drawing oil from the inside, oil tank to the burner. That's

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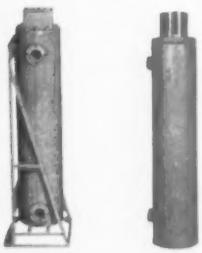
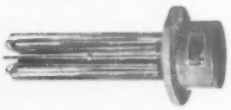


CIRCULATION HEATERS



AUTOMATIC SUCTION LINE HEATERS

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Write for new fuel oil heater catalog V.O.59.

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Versatility in Electric Heating
Vulcan Electric Company,
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too high a vacuum; a maximum vacuum of 15″ would fit this job.

The ten-year-old, indirect, oil preheater next to the steam boiler (under-the-waterline type) raised its output oil to a maximum temperature of 115°F. with the boiler raising two pounds of steam pressure after the burner had been running steadily almost an hour.

Thus the fueloil went to the electric, cup-line oil heater on the burner at only 115°F. This electric heater remained "on" all the while the burner ran. Using my Amprobe snap-on ammeter, I easily ascertained that. But with the oil going into the electric, cup-line, oil heater at only 115°F., this heater could not raise the cup-line oil to a temperature high enough for excellent atomization by the cup.

As the return-line fueloil had passed through the indirect oil heater, the temperature of the return line also was 115°F. Return oil at that temperature was going back to the oil storage tank.

However, this warm return oil was not going down to the bottom of the tank and into the suction line to provide it with some warmth. The return line simply spilled its oil into the top of the tank, wasting the warmth of this return oil.

Two Improvements

Instead of being switched from No. 6 oil to No. 5 to end its troubles, this job was improved by two simple steps:

1. A much larger, indirect oil heater was installed to replace the original under-the-waterline heater. The new heater was large enough to produce a temperature of 160°F. for its output fueloil, with the boiler water at a temperature of 200°F. (summer operation for a tankless water heater in the boiler, thus the boiler is not steaming when at 200°F.).

2. The return-line piping at the oil tank was changed so that all of the hot, returned oil would go down to the bottom of the tank, then into the suction line. A pipe-within-a-pipe arrangement was used; around the 2″ suction line, a 4″ pipe provided the space for the hot, returned oil to go down to the suction-line opening at the bottom of the tank. A "tank bell" or "suction bell" (without a coil to heat the oil using steam or hot water) could have been used instead to accomplish the same results.

COMMERCIAL & INDUSTRIAL oilburning

These two improvements, which cost the owner only about $500, permitted continued operation with the burner using No. 6 oil. In fact, the improvements caused the installation to work better using the well-heated No. 6 oil, than it would have worked unimproved and switched to much higher priced No. 5 oil.

After the improvements had been made, the oil pump in the burner developed a vacuum of only 8″ with the basket in place in the suction-line oil strainer—compared to the earlier vacuum of 22″ without a basket in the strainer.

The size of the indirect oil preheater, at the side of the boiler, is highly important in instances of these kinds of trouble, which cause owners to consider switching from No. 6 oil to No. 5 oil.

The basis I often use for sizing this indirect oil heater is the one already described. Have fueloil come from this heater at 160°F. with the boiler water at 200°F. — boiler not producing steam. In selecting the heater size you must, of course, properly take into account the gph flow rate of the oil going through the heater.

If you want to make a high point of easy start-up of a burner with the boiler stone cold, you can install high-capacity electric preheaters in the oil line on the output side of the under-the-waterline (or equivalent) indirect oil preheater.

Install electric heaters of sufficient capacity in this location, and with the boiler stone cold the oilburner will start up as nicely as though the boiler were hot. Instead of the indirect heater giving the burner fueloil that's well heated, say at 160°F., the electric preheaters on the output side of the indirect heater will provide oil heated to that temperature.

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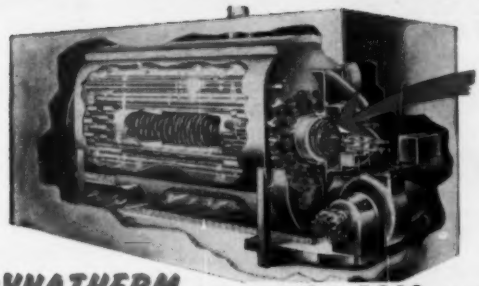

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AUTOMATIC HUMIDIFIER CO., Cedar Falls, Iowa

Manufacturers Since 1925 of a Complete Line of Automatic Humidifiers for Warm Air Furnaces

Truck Talk

by Chet Cunningham

THOSE LONG LASTING mufflers that every fueloil trucker has been waiting for, just might not be stainless steel at all—in fact it's almost a certainty now that they will be aluminum. A small company in Detroit finally did what all of the huge aluminum companies themselves couldn't do. And that small company probably will make a fortune.

This new muffler will be placed on the market soon, and it probably will last the lifetime of any vehicle it is put on. The old problem of aluminum melting in mufflers was licked when the inventor gave the muffler a series of radiator-like ribbing. The idea was to take advantage of aluminum's known quality of high heat conductivity. It simply radiates the heat out into the air before it can melt the aluminum.

Using this principal, the muffler never gets any hotter than about 650°. Aluminum melts between 950° and 1200°, so there is a good safety margin.

This muffler weighs about half of what present steel mufflers do, and will cost about 50% more. But it should be worth it if you don't have to replace that muffler every year.

Night traffic accident and death rate is nearly three times the daytime rate. The Michigan Trucking Association offers some tips for better night driving.

- Check all lights each time before night driving. Replace any burned out bulbs or units immediately. Be sure all lights are clean.
- Keep your windshield clean, both inside and out.
- Dusk is the most dangerous time to drive. Turn on lights early. Don't use high headlight beams in an attempt to get more light on the road at dusk. It causes glare.
- Dim your lights when within 500 feet of approaching traffic.
- If oncoming headlights glare, use the right-hand edge of pavement as guide.
- Dim your lights when following other vehicles.
- Slow down after dark.
- Don't drive at night if you are tired.

Having trouble with a rough idling engine? The trouble may not be your spark plugs or points at all. It could be a dirty carburetor air cleaner. The air cleaner starts to choke off the air supply, and that causes an over-rich mixture and rough idling. If your fueloil truck has dry-type carburetor air cleaners, be sure to clean or replace the filter units regularly. The later model units do a very good air cleaning job—therefore they fill up faster. Clean or replace these units according to the maker's suggestions.

Some day soon, bearings may be lubricated by air, not grease. At least this is what some of the "way out" engineers now say. They say that air makes an ideal lubricant. A constant stream of air through the bearing area keeps the bearing clean and air cooled. Basic principle is to use about 30 psi air pressure to provide a 1/1000th inch film of air between bearings and housing.

B. F. Goodrich points out that no matter how good a tire you start with, the service that a tire gives is mainly up to the driver. They give these driving rules to add miles to your tires. You might duplicate these as a bulletin to all of your drivers:

1. Avoid speeding over rough roads, chuck holes or roads with loose material on them.
2. Do not drive over curbs by making too short a turn into a driveway, or by backing over curbs.
3. Avoid riding the edge of the pavement, half on, half off.
4. Anticipate stops, avoid sudden and improper use of brakes.
5. Start slowly and do not spin wheels.
6. Drive at moderate speeds, particularly with full loads and during hot weather.
7. Avoid improper load distribution.
8. Check for soft and flat tires frequently.
9. Report misaligned wheels or other abnormal conditions noted while driving.
10. With diesels shift gears at proper RPM's only.

Ever thought of using seat belts in your trucks and cars? There are pros and cons about belts, but more and more surveys and experience are adding up to this. Seat belts will help prevent injury and save lives.

Cornell University has done the most along testing and research and it says that seat belts will help reduce injuries from 60 to 87%. This is from actual accident studies from 22 states. Belts are no cureall, but more and more alert organizations are making belts mandatory on their fleets.

Do you know that a tire on any of your fueloil or heating trucks can lose up to 25% of its air—and not a leak or bad seal be involved? It's true. The fact is that any tire that has been filled with air recently, can lose all of the oxygen out of it.

Since the normal air contains about 23% oxygen, that's how much your tire pressure will drop. It all comes about because oxygen has the peculiar ability to seep right through rubber. All the oxygen escapes, so you have to re-inflate your tire. A new tire will also grow or stretch by about 3%, so again you have 3% less volume of air in your tire.

Don't let battery deposits sneak up your cables. The best way to do this is to paint the battery terminals with some kind of a liquid rustproof. One application will keep deposits off the cables for months. Or use a good heavy grease around the terminals of your battery.

"When you argue about the right of way with somebody in traffic, you very well may be insisting on your last rites!"

Remember that rubber and oil just don't mix. Rubber softens and turns spongy when soaked in gasoline, fuel-oil, grease or any other petroleum product. It stands to reason that your tires are going to give better service if you keep them out of these fluids.

One cause is driving through puddles of oil and grease around the shop and yard. But oil or grease can get on tires in other ways, too. Leaking or overflowing hydraulic oil tanks and lines, transmissions, differentials and grease seals can also help mess up a tire. To stop this, keep all connections tight and wipe any oil or grease from your tires as soon as it is found.

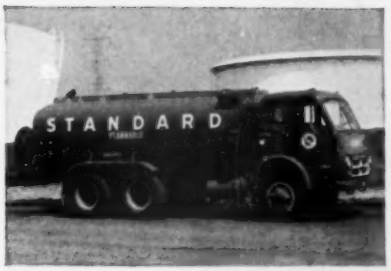
Ford is back in the gas turbine power plant news. Its latest is a "704" gas turbine with 300 horsepower and supercharging. This new engine weighs only 650 pounds. A comparable diesel engine averages about 2700 pounds.

Ford says that the fuel economy of the "704" is superior to conventional gasoline engines under most operating conditions. Part of the reason is the two stage air compression and the two combustion chambers and burners. They give the "704" a high degree of efficiency. Ford's next step is to test the engine in a car or truck. It has been under development for two and a half years.

Ever knock yourself out trying to twist a bolt that has decided to rust and corrode itself tight? You can miss this problem by using a good rust proofing solution on those rust-prone bolts. Apply it every time you lube. Most oil companies put out an anti-rust product.

Good news for a change from the Internal Revenue boys. They say that the cost of tires and tubes purchased on new commercial trucking equipment and used in motor freight transport, are deductible for income tax purposes. This is deductible in full in the taxable year of purchase and payment.

This holds if the tires and tubes are "consumable within one year," or if their average life is less than one year, even if extending into the next year.



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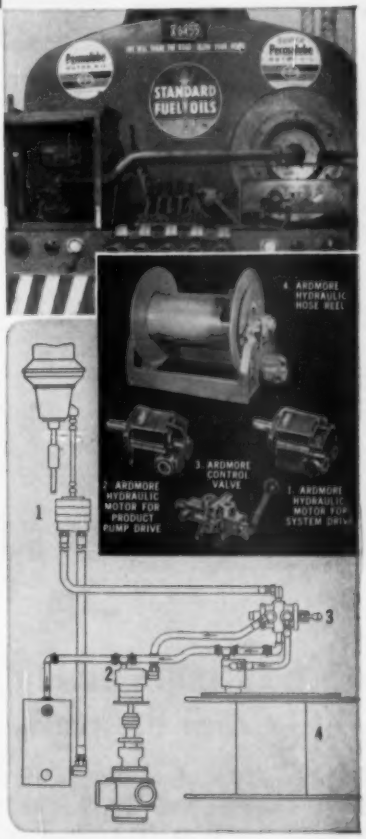

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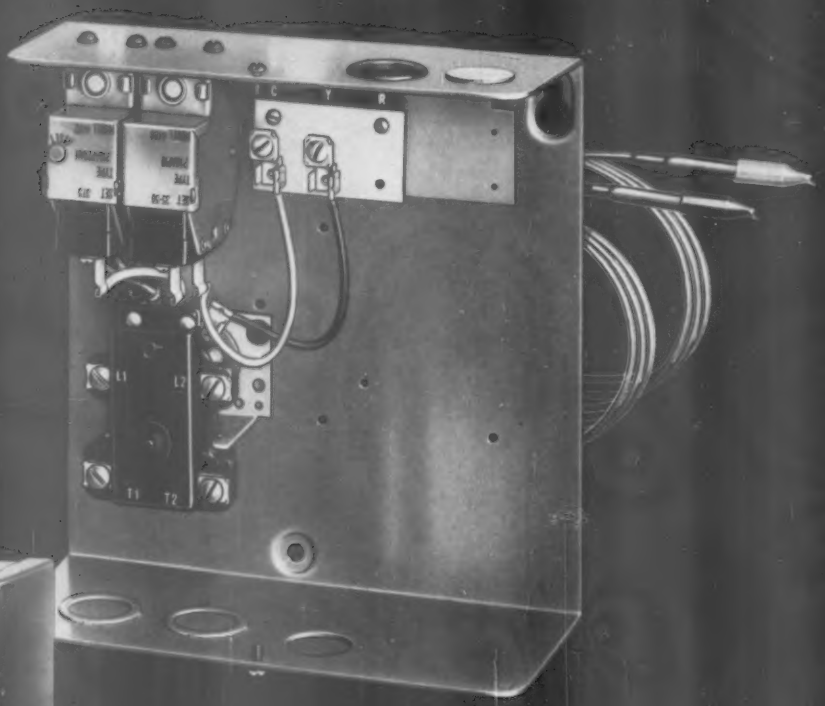

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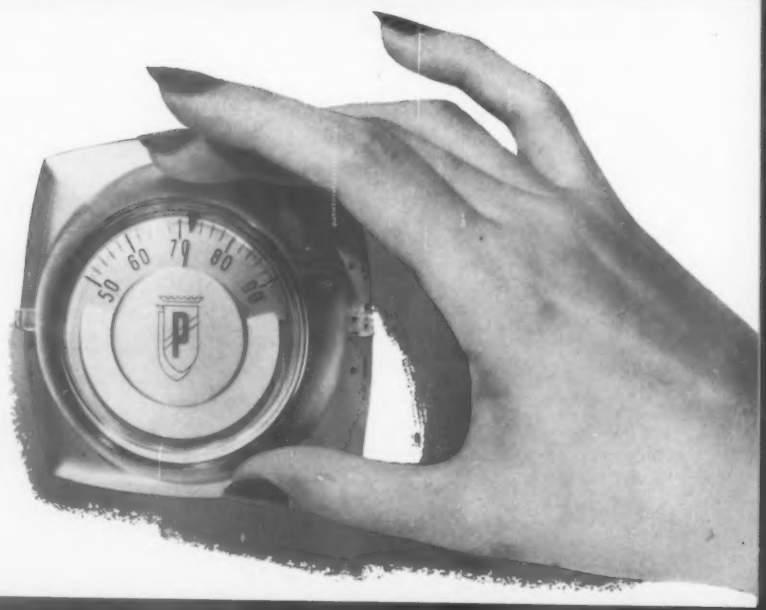

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also means better combustion In Fire Boxes

Whether you're quoting on new fireboxes or converting old ones, you can sell prospects faster by pointing out the advantages of B&W Insulating Firebrick.

B&W IFB heat up faster than ordinary firebrick, then confine the heat to the firebox. This results in higher firebox temperatures, more complete combustion. It's only logical that with better combustion, soot and odors will be materially reduced. B&W IFB also have excellent acoustic properties, assuring quieter operation.

Clinch the sale by explaining that lightweight B&W Insulating Firebrick save 20% in fuel bills. That means approximately 1 year's fuel free for every 5 years of operation.

A Valuable Guide for Every Installer

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R-625

THE BABCOCK & WILCOX CO.
Refractories Division
Works: Augusta, Ga.
General Offices: 161 East 42nd St., New York 17, N. Y.

NEW PRODUCTS

Honeywell Diamond Jubilee Thermostat retains Characteristics of round Model

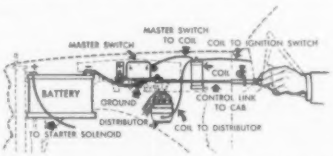
HONEYWELL'S T86 Diamond Jubilee Round thermostat has been redesigned to make it more functional, yet it retains the basic appearance and characteristics of the original Round.

The new model has a 40% larger "picture window" dial and 20% larger indicating numerals; set point scaleplate is located at the top of the thermostat; thermometer scale is at the bottom. The T86 incorporates a "comfort zone" that constantly indicates heating and airconditioning system performance. It continues to feature a bimetal thermometer, enclosed mercury switch, adjustable heating anticipator, removable back plate and captive mounting screws.

Made by: Minneapolis-Honeywell Regulator Co., 2747 Fourth Ave., S., Minneapolis 8, Minn.

Sampson's Master Switch eliminates Risk of vehicle electrical Fires

SAMPSON'S Master Switch is a mechanical device which cuts the battery loose from the wiring system of a vehicle and at the same time grounds out the ignition system, eliminating the need for an ignition key. Even with a straight-wired ignition, equipment cannot be started when the switch is actuated.



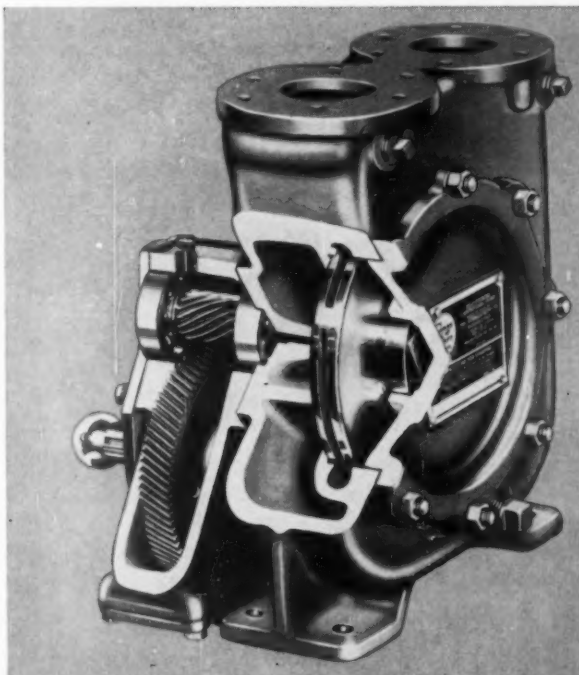
In addition, the switch is designed to eliminate the risk of electrical fires, do away with battery drain. It can be installed at any battery location, with a simple control in the cab to operate the switch.

Made by: Sampson Safety Products Co., Clinton, N. C.

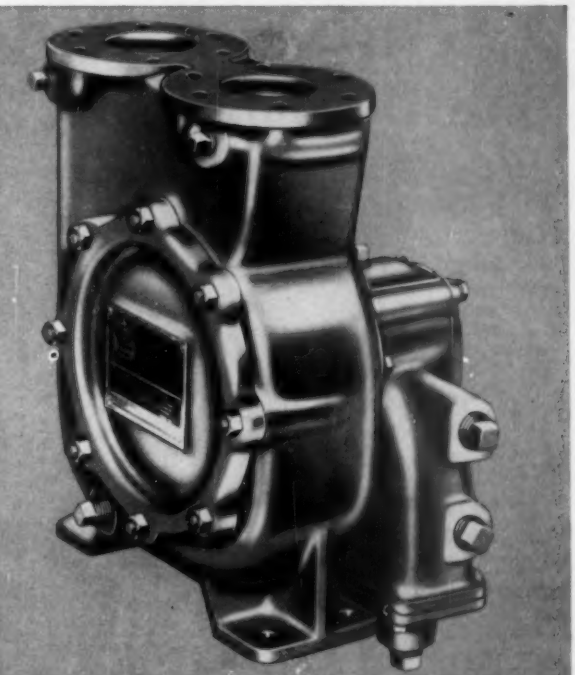
BY GORMAN-RUPP... A SINGLE PUMP TO MEET ALL FUEL DELIVERY NEEDS

40 to 140 GPM, positive action, sure priming, trouble-free performance, no check valve—all in the new Gorman-Rupp 02F3 Pump. Here's the unit specifically designed for quick, efficient fuel oil deliveries. Time is money—so save time —see your Gorman-Rupp Dealer Today!

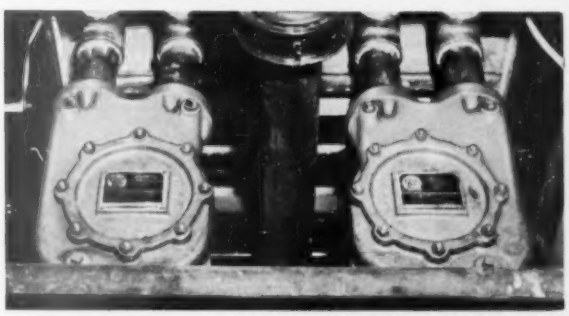
THE GORMAN-RUPP COMPANY
305 BOWMAN STREET • MANSFIELD, OHIO
Gorman-Rupp of Canada, Ltd., St. Thomas, Ontario

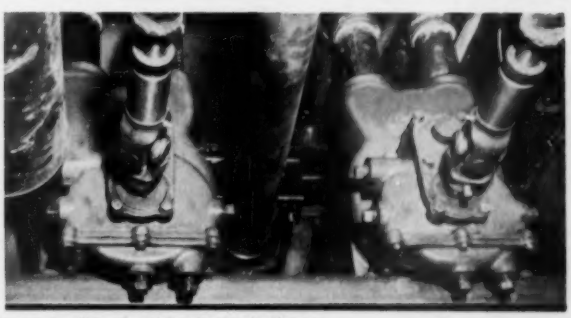


Cutaway view showing helical-ground gears, which increase RPM of power take-off at ratio of 5.69:1.



MODEL 02F3-40 to 140 GPM. PTO speed range of 600 to 1000 RPM, depending on pump pressure desired.

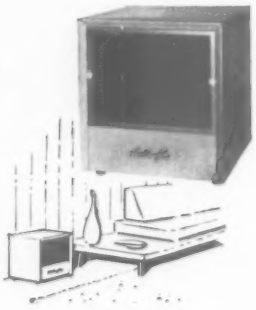




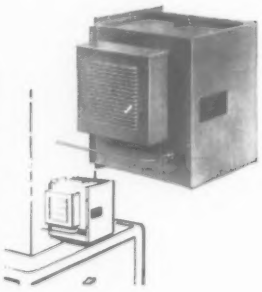
dual installation of Model 02F3 for gasoline and fuel oil delivery.

NEW
FOR FAST SALES
NOW!
FROM
Auto-flo
WORLD'S LARGEST HUMIDIFIER MANUFACTURER
TWO NEW
POWER HUMIDIFIERS

NEW MODEL 60
PORTABLE
POWER HUMIDIFIER
HANDSOME portable distributes humidity in pure vapor form. High capacity 110 volt A.C. unit has simple push button controls. BUILT-IN HUMIDISTAT, humidifies even large homes. Attractive cabinets blend with any decor.



NEW MODEL 30
FURNACE
POWER HUMIDIFIER
EFFICIENT high capacity unit adds humidity in pure vapor form to even large homes. When furnace blower comes on, humidifier fan and recirculating pump go to work! 110 volt A.C., no drain connections, no drain problems. Humidistat package available.



FULL ONE YEAR WARRANTY
AUTO-FLO CORPORATION
12085 Dixie Street, Detroit 39, Michigan
Dept. FA-1
Please send me full information on:
☐ Portable Power Humidifier ☐ Furnace Power Humidifier
Name _____
Address _____
City _____ Zone ____ State _____

Armstrong Furnace has introduced redesigned oilfired horizontal Units

ARMSTRONG's new oilfired horizontal furnaces have been redesigned for higher efficiency and greater flexibility. Oilfired models are available in 84,000, 112,000 and 135,000 Btu outputs, with each featuring ability to change easily from air discharge left to air discharge right. Blower motors are split-phase, shaded-pole and permanent split capacitor.

Made by: Armstrong Furnace Co., 851 West 3d Ave., Columbus 12, Ohio.

Opw stainless steel swivel Joints with steel ball Bearings and Races

OPW SWIVEL JOINTS, the 7400 Series, are made of stainless steel, with precision steel ball bearings and races that keep the joint in alignment. They also maintain the joint's free-turning action. Each swivel joint has an O-ring to prevent leakage; there also is a felt dust seal that keeps lubrication on the ball races.

Swivel joints are also offered in bronze, steel, monel and aluminum.

Made by: OPW Corp., 2735 Colerain Ave., Cincinnati 25, Ohio.

Weil-McLain announces Moulding for its cast-iron Baseboards

WEIL-MCLAIN has announced a new Trim-Seal heat-proof extruded neoprene moulding for cast-iron baseboards. It installs without nailing by slipping the extended skirt of the seal between the baseboard and the wall. It can be painted and is flexible enough to fit snugly despite minor wall irregularities. Each package includes a miter box for preparation of 45° corners. Can be cut with knife or hacksaw.

Made by: Weil-McLain Co., Michigan City, Ind.

Norman Chemical adds Pet-Re-Kleen for boiler combustion Treatment

NORMAN CHEMICAL has added Pet-Re-Kleen to its line. It is a boiler combustion treatment, designed to remove carbon, scale, slag and sulphur deposits. It is used by blowing or spreading the compound into the hot firebox and using it daily until the combustion system is clean.

Norman also makes Pet-Re-Nol fueloil conditioner, designed to eliminate moisture, sludge and carbon.

Made by: Norman Chemical Co., 1630 Carroll Ave., St. Paul 4, Minn.

Viking Instruments Filter Watcher signals when air Filters are dirty

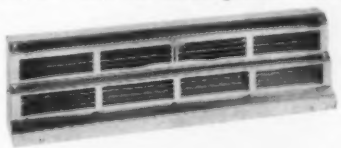
FILTER WATCHER automatically signals homeowners when air filters have become dirty or clogged. Installed on the furnace or blower enclosure between the filters and the blower, the unit sucks air through the Filter Watcher whistle as filters become dirty. Gradually a signal builds up to an audible alarm to indicate the need to clean or change the air filters.

Attachment requires tapping a ½" air passage hole through the furnace or blower enclosure and attaching the Filter Watcher with self-tapping screws.

Made by: Viking Instruments, Inc., East Haddam, Conn.

Lima introduces baseboard Diffuser which features nickel-plated Finish

NICKEL-PLATED baseboard diffusers are being marketed by Lima Register. Made in 18" size the nickel-plated model is recommended for installation in rooms with limited wall space. It accommodates up to 6" round pipe.



Made by: Lima Register Co., Lima, Ohio.

Duo-Therm's In-the-Wall Furnace has an automatic electric Pilot

DUO-THERM's 60,000 Btu output In-the-Wall furnace has an automatic pilot, which is a resistance element in the burner that always is hot. When the thermostat calls for heat, oil flow to the burner starts and the pilot ignites the fuel. When no heat is needed, oil flow is cut off entirely.

The unit roughs-in to a space 24" wide by 26" deep; it includes a high-pressure fan for warm air circulation as well as forced draft for burner operation.

Made by: Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.

NEW
FOR FAST SALES
NOW!
FROM
Auto flo
PERMANENT WASHABLE
AIR FILTER

Double-filter zips open.
Removable all-metal frame.

Wash, wring and replace miracle-maze Polyurethane filter in seconds.

Treated with DUPONT THIURAM® a germ killing agent.

Safe, easy to handle . . . no irritating glass or metal particles to harm skin.

Non-allergenic, non-toxic, can't rot or mildew.

Washes like a towel . . . never needs oiling.

- 100% filtration area . . . outperforms all other filtering materials.
- Miracle maze, double-wall design holds more dust yet allows better air passage.
- Attractively packaged in "self-selling" cartons.

AUTO-FLO CORPORATION
12085 Dixie Street, Detroit 39, Michigan
Dept. FA-2
Please send me complete information on your new permanent washable Air Filter.

Name _____

Address _____

City _____ Zone _____ State _____

Watts announces a full Line of relief Valves for heating Boilers

WATTS REGULATOR has announced a new full line of ASME-rated pressure safety relief valves for hot water space heating boilers. Available in ¾" and 2" sizes, the No. 740 Series has large internal flow areas and expanded outlets. High discharge capacities make them ideal for boilers which previously required larger size valves, providing for a lower Btu per thousand cost, as well as simplified stocking.

Made by: Watts Regulator Co., 10 Embankment Rd., Lawrence, Massachusetts.

Aeroil Products introduces Line of oilfired, portable Heaters

AEROIL'S line includes three oilfired, portable heaters mounted on rubber tired whels. They have capacities of 125,000, 250,000 and 500,000 Btu/hr and feature stainless steel combustion chambers with gun type burners.

Continuous ignition is supplied by a 10,000 volt transformer; either kerosene or No. 2 fueloil can be used in the integral tank.

Made by: Aeroil Products Co., 125 Wesley St., South Hackensack, N. J.

American TRIPLE PLAY

3 ANSWERS TO BASIC NEEDS IN PLUMBING AND HEATING

For control of:

1. Hot Water Heating System Expansion
2. Expansion in Baseboard Radiation, Mains and Piping
3. Water "Hammer"

American EX-TROL EXPANSION CONTROL

The pressurized, diaphragm equipped expansion tank for hot water heating systems.

Provides a permanent air cushion. Eliminates water logging and weeping relief valves. Eliminates cause of air troubles in system. Saves call back time and replacement costs. Saves installation time and space.

The only truly efficient expansion tank for old or new systems.

American BASE SLIDE EXPANSION JOINT

The modern piston slide design expansion joint for baseboard, mains and piping.

Up to three times more expansion movement.

Full rotation for easy installation.

Long life with double "O" rings and positive protection.

Available in six sizes from ½" to 2".

American HYDRO SHOCK SUPPRESSOR

The only practical method of eliminating water "hammer." Piston type suppressor combines advantages of a resilient air cushion with those of a free floating piston. Factory charged and sealed.

Amazing shock absorption.

Easily installed — maintenance free.

Long life—rust free.

Ask your wholesaler or write for literature on these and other products.

Specialists in the field of hydropneumatics for the plumbing and heating industry.

American TUBE PRODUCTS, INC.

WEST WARWICK, RHODE ISLAND

Manufacturers of Tankless Heaters, Tube Hangers, Flexible Corner Connectors and other hydronic accessories.

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FIRST in QUALITY and POPULARITY!

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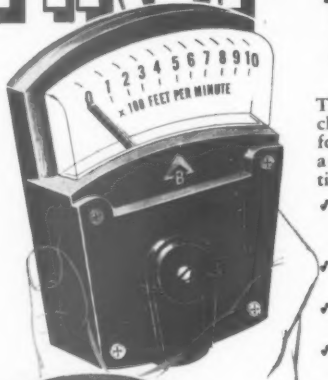
AIR VELOCITY INDICATOR



Takes guesswork out of checking the operation of forced air heating, cooling and ventilating installations. Use it to:

- Check air flow at registers, grilles, diffusers, convectors.
- Spot objectionable air movements in rooms.
- Detect leaks around doors and windows.
- Check air flow in display cases, reach-in refrigerators, walk-in coolers, etc.

$12.90 FACTORY NET

The ideal pocket-size air velocity indicator; direct-reading; can be used for checking air flow through openings as small as ¼" in diameter. Range 0-1000 ft./min. Supplied with pocket case.

BACHARACH INDUSTRIAL INSTRUMENT CO.

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RUSH details on FLORET Air Velocity Indicator to

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Now...in Good Housekeeping and backed by the famous Guaranty Seal

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AIR FILTERS

FOR HEATING
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*KILLS THE GERMS THAT BREED IN FILTERS

. . . kill 99+% of germs trapped to create new consumer benefits and new filter profits for you!

Ask your distributor or write to **FRAM** *Aire Corporation* • Division of FRAM Corporation, Providence 16, R. I.

fuel oil & oilheat

THIS FREE
ZONE-A-TROL
BOOKLET
A Thermostat in EVERY Room
CUTS FUEL COST 20% - 40%
GUARANTEES COMPLETE COMFORT IN EVERY ROOM
INSTALLS ON YOUR PRESENT HEATING SYSTEM
ELIMINATES COLD ROOMS OR ROOMS THAT OVERHEAT
QUICKLY PAYS FOR ITSELF RETURNS ITS COST MANY TIMES OVER
ZONE-A-TROL
ROOM BY ROOM TEMPERATURE CONTROL
COMFORT CONTROL by Econo-Zone-A-Trol
THE MODERN STANDARD OF INDOOR HEATING AND COOLING COMFORT

MAKES IT EASY TO

SELL

ZONE CONTROL

on every job

ZONE-A-TROL VALVES FOR HOT WATER HEATING OR COOLING SYSTEMS.

THERMOSTAT OPERATED
ZONE-A-TROL
AUTOMATICALLY CONTROLS THE FLOW OF HEATING OR COOLING TO EACH ROOM OR ZONE

ZONE-A-TROL
ROOM BY ROOM TEMPERATURE CONTROL

To make it easy to sell as well as install zone controlled comfort on every job, Zone-A-Trol, now offers you a new 12 page illustrated brochure that's been especially prepared to help you show and tell your customers the many advantages of installing Room by Room Temperature Control on any new or existing heating or cooling system.

ZONE-A-TROL DAMPER ACTUATOR FOR WARM AIR HEATING AND COOLING.

SEND COUPON TODAY

ECONO PRODUCTS COMPANY, INC.
Division of Viking Instruments, Inc. East Haddam, Connecticut

Gentlemen:
Please send me a copy of A THERMOSTAT IN EVERY ROOM

NAME_____
COMPANY_____
STREET ADDRESS_____
CITY & STATE _____

COMFORT CONTROL by Econo-Zone-A-Trol

Iron Fireman adds oilfired Boiler to its Custom Mark II equipment Line

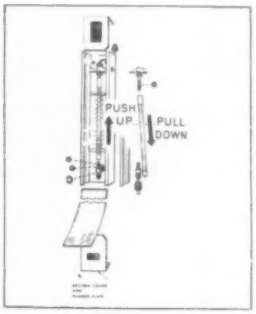
A COMPACT Iron Fireman oilheating boiler employs new smokless operating principle designed to reduce fuel cost. The unit, known as Custom Mark II boiler, provides its own air for combustion and does not require a conventional chimney. Only a small inexpensive exhaust pipe to the outdoors is needed. Unit's new smokeless principle claims soot-free operation, sharply reducing servicing costs, since the unit is described as not requiring annual cleaning.

The new boiler is a mere 35" high, 20½" wide, 50" long. It can be used for hot water or steam heat, is available with heating capacities of 110,000 and 145,000 Btu/hr.

Made by: Iron Fireman Mfg. Co., 3170 West 106th St., Cleveland 11, Ohio.

Petrometer liquid level Indicator features "snap-in" glass Column

NEW PETROMETER liquid level indicators simplify removal of the glass indicating column for cleaning or replacing. The glass column containing the indicating liquid is held in position by two receptacles at the top and bottom of the indicator with O-ring seals. After draining the liquid, the column is removed by pushing up against the spring action of the upper receptacle, tilting the tube out and pulling down. To reinsert, the procedure is reversed.



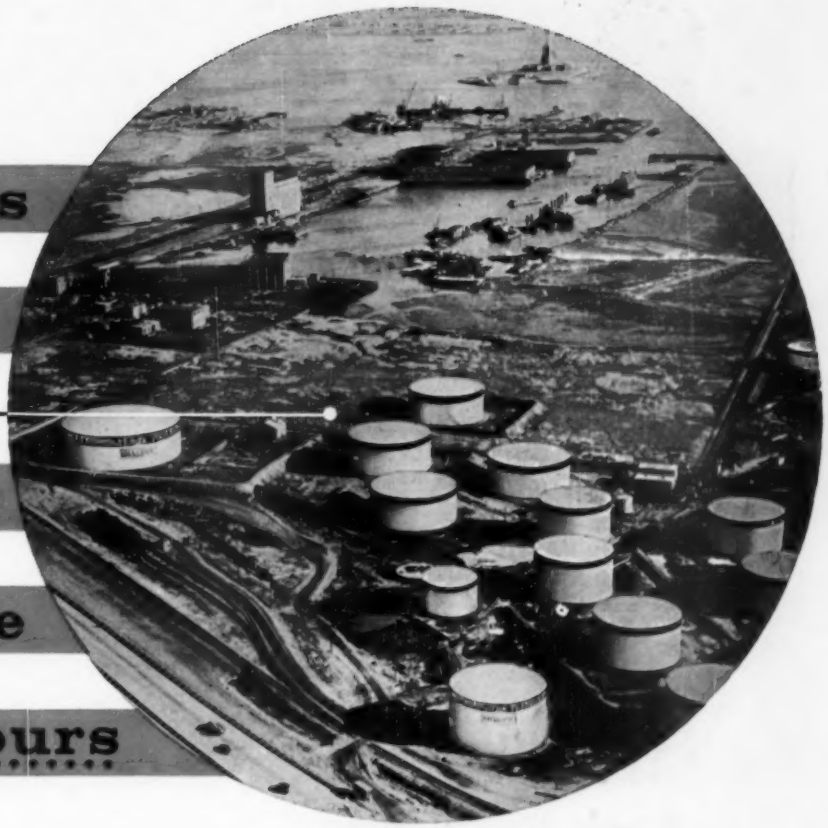
Made by: Petrometer Corp., 43-22 Tenth St., Long Island City 1, N. Y.

Safeguard furnace Filters feature aluminum frame, come in six Sizes

SAFEGUARD furnace filters approved by UL feature an all-aluminum frame and non-corrosive construction. The new Sa-Foam is made of plastic and is cleaned by flushing under running water. It cannot mat, is non-allergic, and removes a high percentage of pollen from the air. Each filter is individually packed in a polyethylene envelope. They come in six sizes with adapters available to convert the 1" size to a 2" size.

Made by: Safeguard Corp., Lansdale, Pa.

This terminal could be yours



When you join the Metropolitan family, all of its facilities become a part of your service organization because your trucks are not forced to take second priority. Metropolitan is engaged exclusively in the wholesale fuel oil operation and does not operate a branded truck fleet.

In the New York Metropolitan area alone, there are seventeen modern terminal plants, as well as pick-up points throughout North Jersey, New York State, and Lower Connecticut, all conveniently located to help you serve your customers promptly and economically.

Metropolitan Petroleum assures you of a dependable supply, prompt service, and unvarying quality.

Let us help you serve your customers better.

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fuel oil & oilheat

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If you can increase your sales, then you can increase your NET PROFITS, by using our funds. Experienced executives with years of service to the heating oil industry will tailor a flexible Financing Plan to your specific needs. Get in touch with Lexington in Boston or the Talcott office nearest you for full facts.

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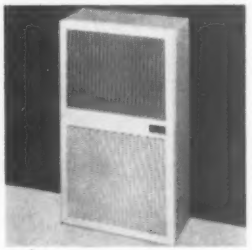
New National-U. S. fan-coil Unit features individual room Control

SPOTAIRE VRS fan-coil unit, announced by National-U. S., features three-speed push-button individual room control and an optional adjacent room supply, permitting the conditioning of two small rooms with a single unit. Damper-controlled diverted air passes through a flush-mounted grille into the second room. Units can be installed free-standing or recessed between standard 16" studs.



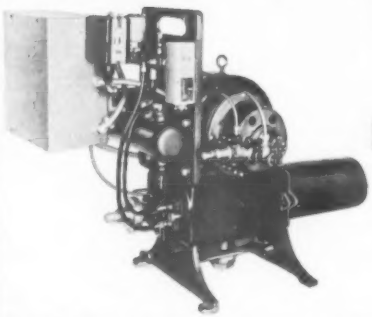
Spotaire units are furnished in two sizes: One model has a rated nominal capacity from 2,500 to 5,500 Btu/hr, 150 cfm air flow rate; the other model is rated at double the capacity of the smaller unit. Dimensions are 6¾" deep and 23½" high; smaller unit is 14⅛" wide and the larger model is 27⅝" wide.

Made by: National-U. S. Radiator Corp., 944 Ash St., Johnstown, Pa.

Zone-A-Trol Divert-A Flo Valve is operated by low-voltage Thermostat

ZONE-A-TROL DIVERT-A FLO valve installs on the main supply loop and provides a combination scoop feed supply

No. 4 OIL BURNER by ELECTROL *fully automatic*



ELECTROL HO Series Oil Burners are designed specifically to burn No. 4 fuel oil and feature:

- No moving arms and rods, special pumps, or heaters.
- Famous Electrol Cut-off Valve prevents after-drip.
- Hot oil at nozzle on every burner start.
- Standard stock items—heater, controls, valves, nozzles, pump, etc.
- Three models, 2 to 20 gph.

and . . . the finest and most complete line of #2 oil burning equipment including warm air furnaces, boilers and water heaters, from .75 to 24 gph.

Write for "HO, No. 4 Burner" literature, or on any oil burner problem.

ELECTROL BURNER MANUFACTURING CO., INC.
RUTHERFORD, NEW JERSEY

this **WALKER** SHUR-FLO Draft Inducer-Regulator Unit...

ENDS DRAFT PROBLEMS RIGHT FROM THE START...

MODELS For Gas... Oil... and Solid Fuels!

"I don't fuss and fret with uncertain draft anymore since Walker brought out this low-priced draft inducer-regulator combination. Now, I install Walker inducers on all my jobs. That puts me way out ahead, because with good draft I know every job will be exactly right from the start."

THE INSIDE STORY OF SHUR-FLO EFFICIENCY

- Hi Volume Self-Feathering Fan
- Self-Cleaning Blades (No soot build-up)
- Stainless Steel Shaft, Hub, and Blades
- Quiet, burn-out proof motor
- Silicone oiled Bearings
- Extra heavy gauge galvanized steel construction
- Extra rigid mountings.

"Most Efficient Draft System Ever Made"

Say Heating Contractors, Architects, Home Owners

Draft problems end with Walker Shur-Flo (Pats. Pend.), SUREST DRAFT SYSTEM EVER DEVISED for oil, coal or gas-fired installations from older homes to modern, low-roofed houses. Install it, forget it! What could be better?

Fan-operated draft-inducer draws *only* flue gases — *not* outside air. Quiet. Costs less to operate. Needs little power. Installs quickly at *any* angle. Virtually eliminates costly call-backs, corrections.

For full details, see your supplier or write direct

WALKER MFG. AND SALES CORP.

1750 Penn Street St. Joseph, Missouri

Free!

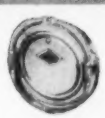
"HOW TO CURE SICK CHIMNEYS"

Now, the *first* ready-reference guide collecting *all* the information on Power Inducer Venting you'll need to solve your draft problems. You'll find it indispensable. Get your handy copy *now!* Absolutely no obligation.

WRITE TO US AT ADDRESS AT LEFT

Scientifically Designed Walker Draft Controls for Every Draft Purpose Are Standards of the Industry. 30,000,000 in Use Prove Efficiency.

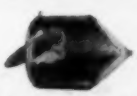
ROYAL PURPLE for smaller central heating plants



BALANCED 34 for larger, special central heating

JUNIOR LINE central heating budget control

TYPE BB commercial and industrial control



DOUBLE SWING for gas fired equipment

VENTURI CAP for heating and ventilating

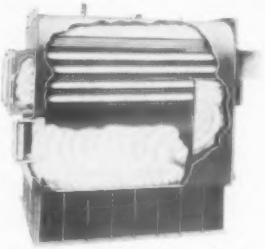
fueloil & oilheat

fitting and zone control valve that automatically controls the flow of water to the radiation in each room or zone. Each valve is controlled by a three wire, low-voltage thermostat. Motor switch assembly activates boiler controls whenever one or more thermostats call for heat. Valves are wired in series and connected to the relay transformer on the boiler.

Made by: Econo Products Co., East Haddam, Conn.

Portmar redesigns three-pass Boiler, is available in 16 oilfired Models

PORTMAR'S TP SERIES, three-pass boiler, has been redesigned. The ASME-constructed and SBI-rated boiler is available in 16 sizes for automatic firing, with steam capacities from 3,870 to 45,000 sq. ft. and steam sizes from 6,190 to 72,000 sq. ft. Working pressure with steam is 15 lbs.; with water, 30 lbs. Available also for 100 lbs. water working pressure.



Made by: Portmar Boiler Co., Inc., 193 Seventh St., Brooklyn 15, N. Y.

Shortest route to
BIGGER PROFITS!
Time saved enroute means money in your pocket! Save time normally used on unnecessary backtracking and duplicate runs — use Du Mont 2-Way Radio. With 2-Way Radio you can have continuous contact between driver and headquarters for rerouting instructions, pick-ups, extra deliveries, etc. 2-Way Radio is the nearest thing to having your office phone in every truck — its so convenient, economical and useful.
Write for details
2-WAY RADIO by
DU MONT®
Mobile Communications Division
Allen B. Du Mont Laboratories, Inc. 750 Bloomfield Avenue, Clifton, N. J.

FEATURE AFTER FEATURE ...BY FAR THE FINEST!

Klemm®

FUEL OIL FILTERS

- Exclusive CHEMISTONE® Elements
- 17 Models
- Choice of Glass or Metal Bowls
- Shut-Off Valve (Optional)

The many exclusive customer-pleasing features that you get in Klemm Fuel Oil Filters are positive evidence of quality construction and performance. Repeat sales assure you of lucrative and continued earnings. For safety, economy of operation and trouble-free performance, you'll find it pays to recommend and sell Klemm Filters. See your jobber . . . or write direct.

CHEMISTONE—Genuine filter, not a mere strainer! Traps moisture . . . removes dust, rust and scale to 1/14,000 of an inch.

Klemm PRODUCTS

DIVISION OF
KLEMM AUTOMOTIVE PRODUCTS COMPANY
1722 North Damen Avenue, Chicago 47, Illinois
EXPORT: Guinnesse Co., Inc., New York 4, N. Y.

Explode: All models available with metal or glass bowl

Model FF-538-V—⅜" opening
For: Central heating plants.

Model FF-438-S—⅜" opening
For: Central heating plants.

Model JR-50—¼" opening
For: Space heaters, floor furnaces, etc.

*Model PK-150—¼" opening
For: Space heaters, floor furnaces, etc.

*Model FF-438—⅜" opening
For: Central heating plants.

There's Only One ORIGINAL

SHELL-DESIGNED Combustion Head

An outstanding contribution to Oil Heat. Field-tested through hundreds of thousands of installations operating at peak efficiencies!

The Shell Combustion Head Does Not Cost—It Pays!

The boiler or furnace you install is no beter than its burner.

Absolutely **NO** SMOKE SOOT

. . . highest CO_2!

Available to Burner Manufacturers Only—

MODERN DIE & MACHINE CO.
BOSTON 25, MASSACHUSETTS

WHISTLER

Model E, the only whistle you can install without disturbing the present piping. Model D for new installations.

APPLIED MECHANICS COMPANY
381-389 CONGRESS ST., BOSTON 10, MASS.

Relaxed Solar Heat Dealer Warms City's Heart

From his office, M. M. Fowler raises funds for the local YWCA and Duke University. He's also on Durham's City Council and the Board of Education.

M. M. Fowler handles so many civic chores he hasn't time to run for mayor of Durham, North Carolina

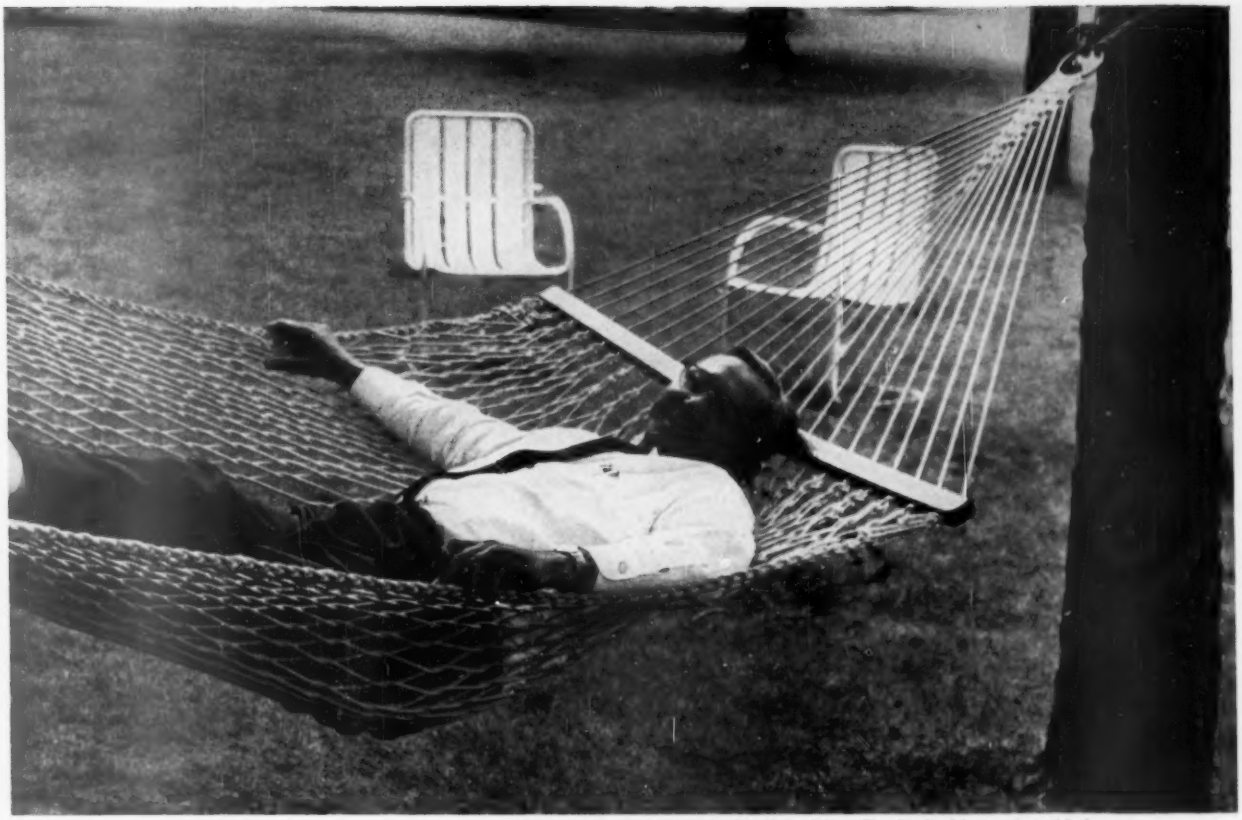
Everyone in Durham knows of Gulf dealer M. M. Fowler. When it comes to civic activities, he's probably the busiest man in town. That's why he was named Durham's Man of the Year in 1953.

"I can spare time from my business to work for the people of Durham mostly because I sell clean-burning Gulf Solar Heat," says Mr. Fowler. "If I sold an ordinary heating oil, I'd be too concerned with burner service calls to have time for more than half of my outside interests.

"With *hydrogen-purified* Solar Heat, I rarely hear of nozzle, filter or strainer trouble any more. So my customers have fewer heating problems and I get fewer complaints . . . more time to relax and enjoy life!"

• • •

M. M. Fowler knows that Gulf Solar Heat burns cleaner because it's *hydrogen-purified*. And he knows from experience that cleaner burning heating oil means fewer service calls and "call-backs."



Summer headquarters for leading citizen Fowler is this comfortable hammock behind his home. Here's where he relaxes in moments snatched from his many civic duties and his busy fuel oil business.

Profits are bigger because service expense is cut to the bone by new Gulfined Solar Heat.

Why not phone your nearest Gulf office and get the *full* story on new Gulf Solar Heat. Learn, too, of the many other selling aids you can enjoy as a Solar Heat brand reseller, such as co-op advertising and direct mail, plus a *strong* dealer identification program.

Mrs. Fowler is proud of her husband's lifetime membership in the YWCA! It was awarded for fund-raising efforts.

These two names are familiar to everyone throughout the Durham/Raleigh area—Gulf Solar Heat and M. M. Fowler.

Service Schools in Group II started by New England OHI

THE SECOND GROUP of Oil Heat Service Schools was begun on January 4 by the Oil Heat Institute of New England. During the course the classes will meet on Mondays in Quincy; on Tuesdays in Fall River; on Wednesdays in Norwich, Conn.; on Thursdays in Providence; and on Fridays in Natick, Mass.

Topics and instructors are as follows: packaged boiler burner units, Lester Bell, Robert Bard and Bert Sell, American-Standard; troubleshooting warm air installations and distribution problems, Robert Whitbourne, Delco; servicing domestic controls and cooling and overfire draft control systems, George T. Hobby and Ralph Cobb, General Controls.

Also scheduled are servicing Toridheet rotary burners by Duane W. Rouse and Lester Clough; Waltham Shell Head burners by Stanley G. Paterson; Winkler low pressure burners by Buddy Garrison; Sundstrand fuel units by James R. Holmin; and McDonnell & Miller boiler safety controls by Richard C. Berry.

The third group of schools will start March 21 and will be held at Salem, Springfield and Arlington, Mass.; plus Hartford and Bridgeport, Conn.

For further information about the schools contact Hollis L. Farrow, director of education, Oil Heat Institute of New England, 839 Beacon St., Boston 15, Mass.

NFC's Hartell talks at Meeting of Massachusetts Association

PRINCIPAL SPEAKER at a recent meeting of the Massachusetts Oil Heating Association in Dedham, Mass., was Ralph Hartell, communications director, National Fueloil Council.

Hartell pointed out that reaction to oilheating promotion is relatively slow because heating equipment is purchased only once or twice in the average lifetime. However, areas having promotion programs have held oil accounts better than the localities having no programs, he said.

Oelbaum named President, Oil Heat Council of N. J.

THE TRUSTEES of the Oil Heat Council of New Jersey have elected Irving Oelbaum, Liberty Fuel Oil Co., Newark, N. J., as president for 1960.

At the same time Richard Morgan, Nassau Oil Co., Princeton, was elected vice-president; Robert Crane, Reel Strong Fuel Co., Cranford, treasurer; William Sortor, Sunrise Oil Co., Englewood, secretary.

These officers comprise the Executive Committee which directs the promotional activities of the Council. Also on the Executive Committee are Robert V. Holzapfel, Esso Standard Oil Co., and J. W. Lang, Jr., Coastal Oil Co.

Watch this door . . .

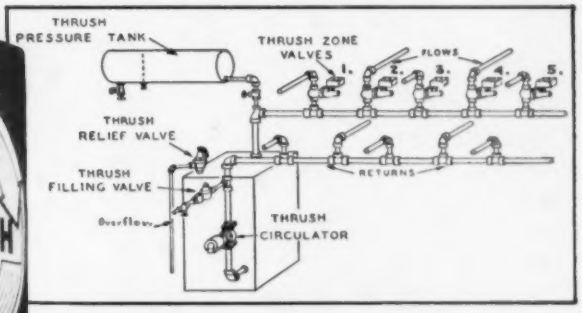
. . . for a revolutionary new development in residential boilers! You'll be hearing — *and talking* — about it soon!

This is the Hydrolo Model 800 — *already proven in every State — including Alaska! Now available for immediate delivery.*

Mt Hawley
MANUFACTURING CO.
1209 W. Alta Road, Peoria, Illinois

THRUSH
ZONED HOT WATER HEAT

Handy Manual Adjustment



BRINGS YOU NEW

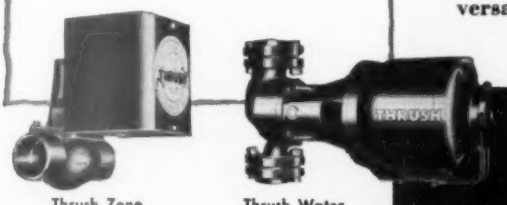
Sales Opportunities

In Motels, Apartments, Stores, Clubs, Churches, Large Buildings and Homes

MULTIPLE ZONING IS NO LONGER COSTLY!

FEATURES OF THRUSH ZONE VALVE

1. SAVES TIME—No need to disassemble to install.
2. SAVES FUEL—Positive shut-off—no overheating.
3. EASY TO INSTALL—Can be installed in several positions.
4. SIMPLE WIRING—Wiring is low voltage.
5. QUIET—NO BANGING—Opens and closes gradually.
6. BUILT FOR LONG SERVICE—Parts are non-corrosive, closed switches, self-cleaning seat, double water seals.



Thrush Zone Valve

Thrush Water Circulator

MULTIPLE zoning today is not a luxury. Without much added expense you can install Thrush Zone Valves on every job so that each room or living area is separately zoned. Thrush zoning assures comfort and economy of operation because heat is not wasted and there is only one Circulator to buy and operate instead of one for each zone. As many zones as desired can be supplied from one boiler. Piping is smaller, lower in cost, easier and faster to install. There is less maintenance and lower power consumption.

A split-level or tri-level home must be zoned for good heating and cold weather comfort. Hot water heating does the job without stratification and maintains the desired temperatures in each zone uniformly. Suggest and install multiple zoning for greater comfort and greater customer satisfaction. When you think of zoned heating, think of hot water heating because no other form of heat has so much to offer in type of heat distributing units or versatility. See your wholesaler today or write Department C-1.

Quality Hydronic Heating Specialties

H. A. THRUSH & COMPANY

PERU, INDIANA

Rhode Island Dealers hear State Officials

TWO SPEAKERS, Frank W. Marcaccio and Joseph Segatore, both connected with the state government spoke at a recent meeting of the Oil Dealers Association of Rhode Island in Providence.

Marcaccio, chief of the Division of Industrial Inspection, told the group that a proposed bill would establish a limited electrical license for oilburner servicemen allowing them to do installation work from the disconnect switch through the heating system.

Rhode Island dealers tour the Taco plant. From left to right: F. Lancia, G. Forgarty, A. Lisi, W. E. Johnson (Taco rep), A. Viti, L. Octeau, and officers of the Oil Dealers Association of R. I.: J. Rotondo, treasurer; W. J. Hernandez, president; J. Scungio, vice president.

Chief of the Tax Department, Segatore, explained the retail sales and use tax law.

Another meeting of the group involved a tour of Taco Heaters, Inc., Cranston, R. I. Visitors saw Taco's research and design departments.

Indiana Coal Merchants Group to include fueloil Activity

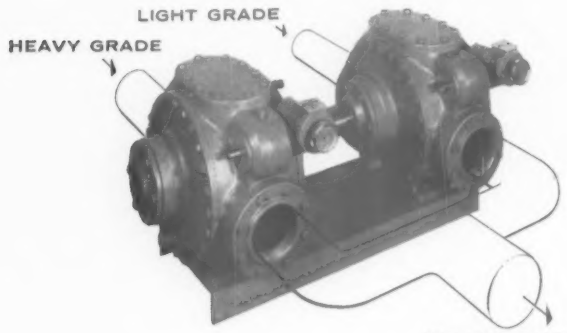
A CHANGE in name, effective January 1, will mark the entrance of the Indiana Coal Merchants Association, Inc., Indianapolis, Ind., into fueloil activity. After the first of the year the group will be known as Indiana Fuel Merchants Association.

J. S. Weber, executive secretary of the organization, explains that the new name will permit the association "to blanket the dual business operations of our members, many of whom are handling fueloil, as well as coal."

National Oil Jobbers appoint Bennett from Texas President

E. K. BENNETT, Longview, Texas, was elected president of the National Oil Jobbers Council at the recent annual meeting held in Chicago.

George Calkins, Denver, Colo., was elected vice president; H. Halsted Park, Jr., New York, elected secretary; and Richard L. Kuss, Ohio, elected treasurer.



STOCK TWO GRADES OF OIL ... blend the grades you need!

New Blackmer Vari-Flo Proportioning puts the flexibility of line-blending well within reach of even small bulk plants and refineries. In fact, savings over batch-blending and other obsolete handling methods quickly pay for a Blackmer system. With burner fuels, for example, you can stock No. 2 and No. 6, blend intermediate grades directly into trucks. Just "dial" any ratio instantly and accurately. There's never too much nor too little. With Vari-Flo, you mix exactly what you need — when you need it. You simplify handling, save on piping, tanks, plant space, transfer equipment, and inventory of finished stocks. Learn now how to streamline your operation, and multiply profits with Blackmer Vari-Flo Proportioning.

FREE CATALOG Write for Bulletin 600

"liquid materials handling"® equipment

BLACKMER

VARI-FLO PROPORTIONING

BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.

See Yellow pages for your local sales representative

"We save over $6,600 yearly and run our fleet more efficiently with Burroughs Accounting Equipment,"

says Mr. H. M. Mohrfeld, President, C. P. Mohrfeld, Inc., Collingswood, New Jersey.

First by wagon, now with a fleet of trucks, C. P. Mohrfeld, Inc., has been supplying fuel oil in the Collingswood area since 1911.

As dramatic as the change from wagon to truck has been the change in this progressive company's accounting methods—from pencil and paper to an advanced Burroughs accounting system.

"We installed our first Burroughs Sensimatic Accounting Machine in 1953," reports Mr. Mohrfeld, "and added another in 1956 when we saw what these machines could do for us. We figure our system saves $6,600 a year in clerical wages alone. In terms of record-keeping time, these machines save us 75 hours a week.

"We use the machines for simultaneous accounting and statement preparation on 4,000 accounts. They also give us—automatically—complete degree-day operating information. This helps us give better service more economically. We're well equipped to handle a steadily growing volume."

C. P. Mohrfeld, Inc., is one of many alert fuel oil businesses helped to peak efficiency—and marked economy—by Burroughs accounting systems. To see what Burroughs equipment can do for you, just call our nearby branch office or write Burroughs Corporation, Burroughs Division, Detroit 32, Michigan.

Burroughs and Sensimatic—TM's

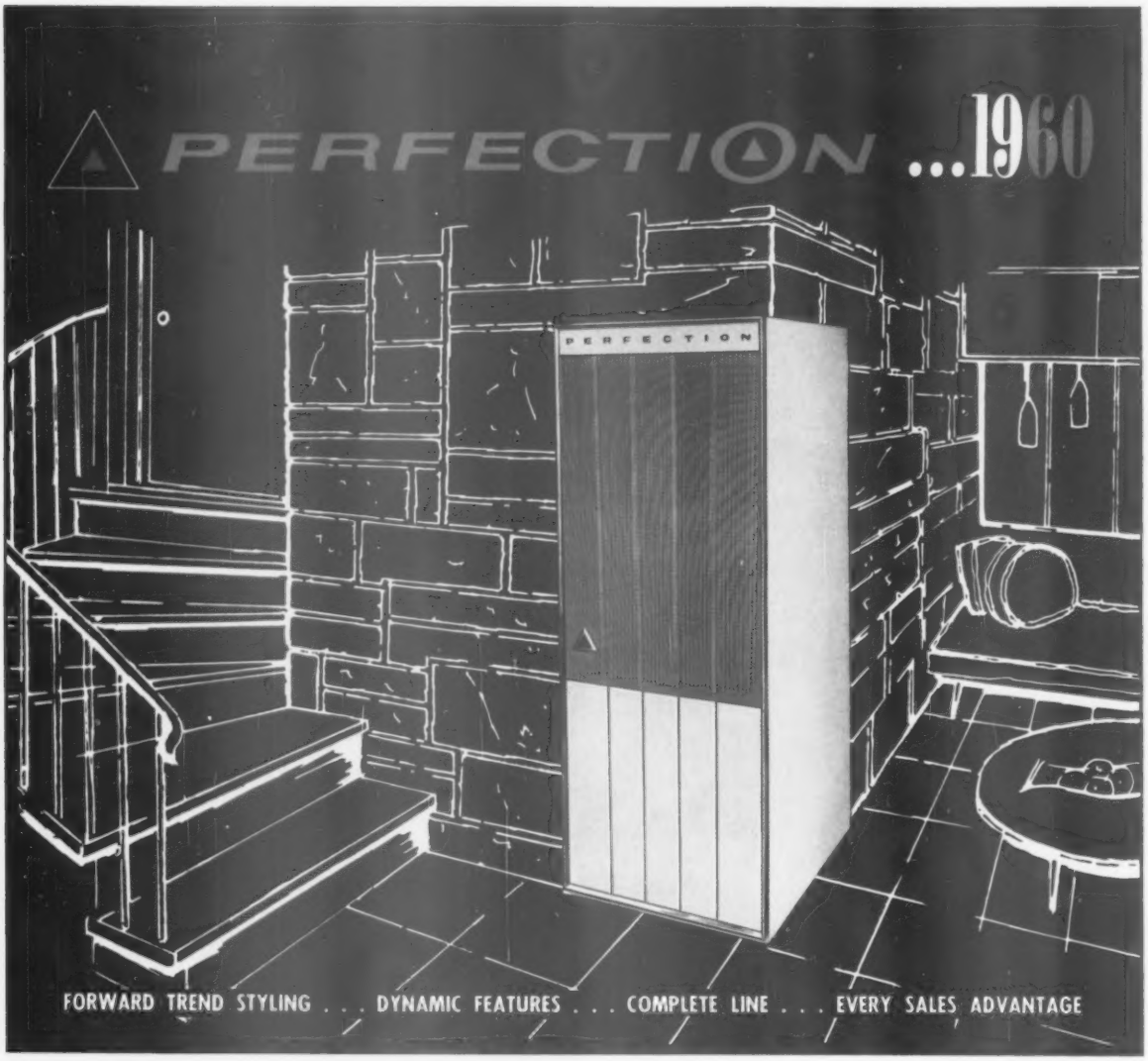
Ask to see our film "Break Through for Profit!" No obligation! Prepared in the interest of fuel oil dealers everywhere.

fuel oil & oil heat

Burroughs

Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"



All yours to sell when you become a Perfectionist

PERFECTIONists SELL FORWARD TREND STYLING
Years ahead of the rest, Perfection's FORWARD TREND Styling is an industry first . . . the *only* furnace selected to be shown as the "heating of the future" at Brussels World's Fair.

PERFECTIONists SELL WITH POWERFUL LOCAL PROMOTIONS
Special promotion programs, specifically tailored to your selling seasons, colorful literature and detailed spec sheets, every display and merchandising help . . . all available when you sell Perfection!

PERFECTIONists SELL EXCLUSIVE FEATURES
Dynamic features make your selling job easier. For example, Perfection's exclusive REGULAIRE® matches heat circulation to demand and ends on-off, hot and cold blasts for top comfort performance.

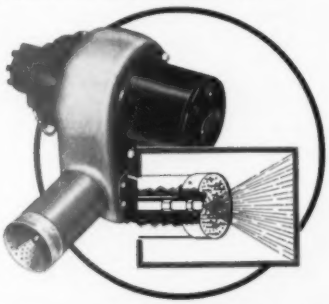
PERFECTIONists SELL A COMPLETE LINE
Upflow, counterflow, basement or horizontal models in every capacity you need — Perfection has a model to match any installation requirement.

MAKE PERFECTION YOUR LINE FOR 1960

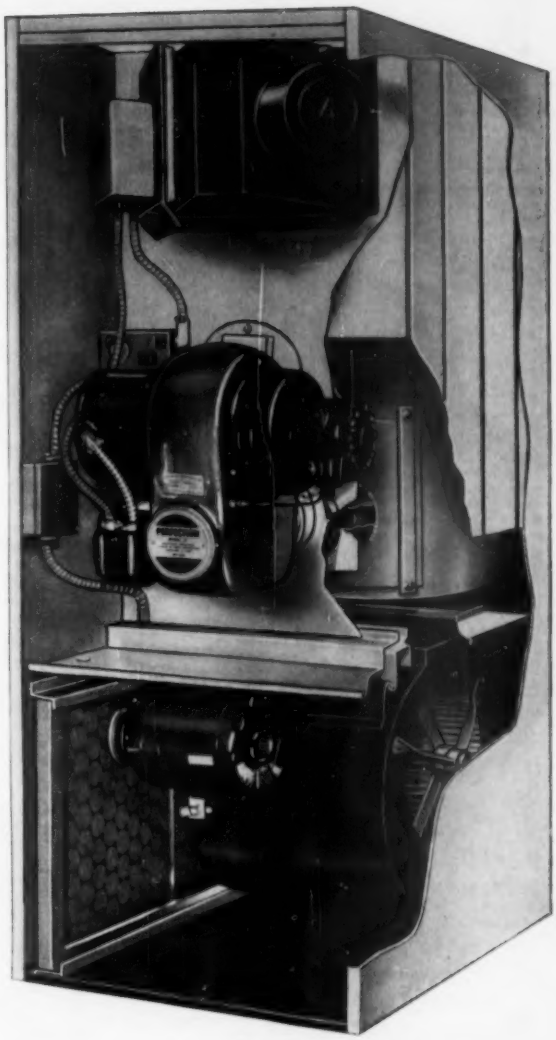
loaded with sales appeal, inside and out

IN OIL Perfection's dynamic oil furnace line combines FORWARD TREND STYLING with feature-packed internal design for top-notch sales appeal. Perfection engineering standards are your guarantee of true comfort, dependability and economy — the kind of equipment performance that you install with confidence. Perfection oil-fired furnaces are completely wired, completely assembled and ready for installation.

MORE EFFICIENT HEAT EXCHANGER Completely new heat exchanger design features a big capacity, wrap-around radiator for extra long flue travel. Internal baffles in the drum and radiator sections increase heat transfer efficiency, insure full rated capacity. Long life ceramic refractory promotes quiet operation, heats up quickly to efficient operating temperature. Combustion chamber is fully assembled and in-place for easy installation.



MULTI-JET BLENDER SAVES ON FUEL Perfection's hi-pressure oil burner with unique Multi-Jet Blender assures quiet, pulsation-free operation. Special design of stainless steel head mixes oil and air perfectly for top fuel economy. Lower nozzle temperatures give years of added life: vital parts are easily accessible through back of burner.

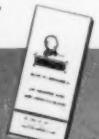


FULL RANGE OF MODELS AND OUTPUTS Upflow, counterflow and basement models for every type of installation; outputs from 84,000 through 140,000 BTUs. There's ample capacity for add-on air conditioning.

CALL, WIRE OR WRITE FOR DETAILS

REGULAIRE® GIVES YOU A BIG SALES PUNCH!

Patented Regulaire solves the problem of stop-start, hot and cold air circulation. A bi-metal coil controls an air damper in blower section, permits gradual opening of the damper until furnace is delivering full heat.

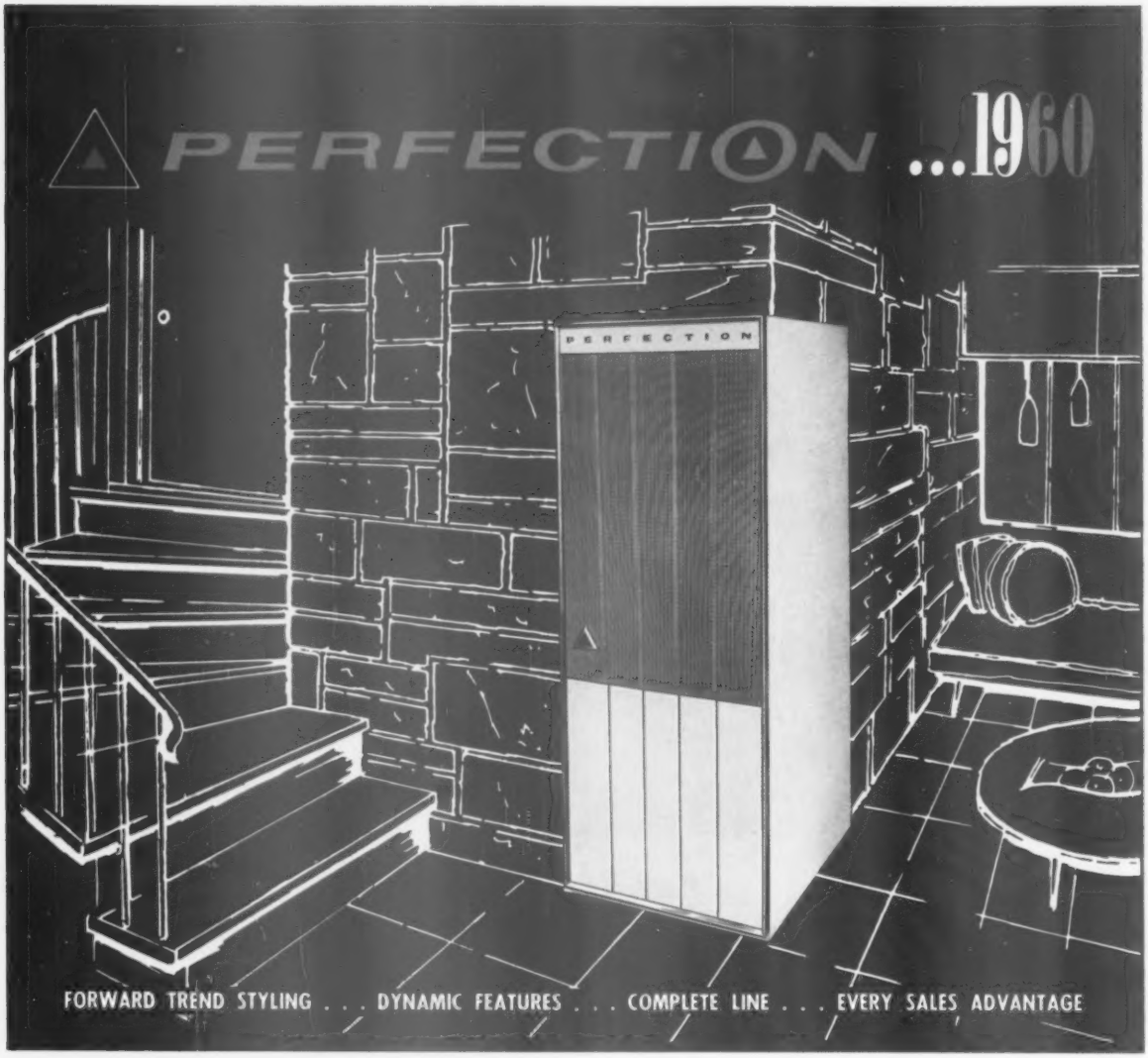


FREE BOOKLET

Contains profitable facts on becoming a PERFECTIONist. Yours for the asking.

PERFECTION DIVISION
HUPP CORPORATION
CLEVELAND 10, OHIO

GUARANTEED COMFORT SINCE 1908



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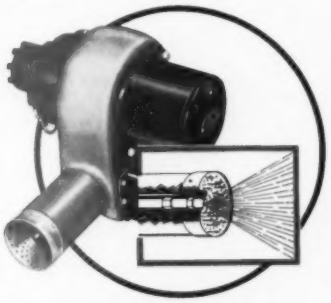

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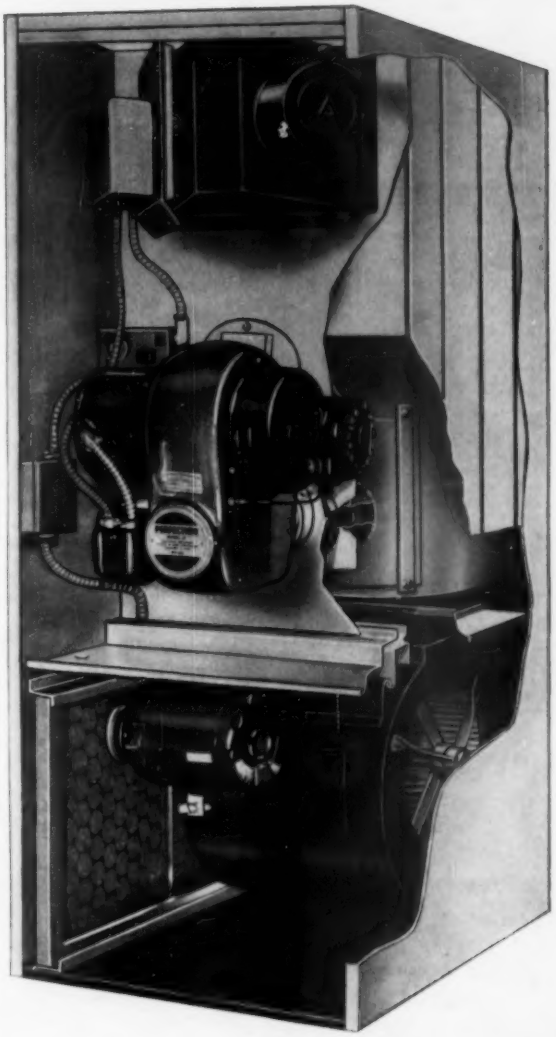

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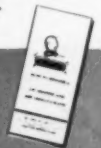

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Contains profitable facts on becoming a PERFECTIONist. Yours for the asking.

PERFECTION DIVISION
HUPP CORPORATION
CLEVELAND 10, OHIO
GUARANTEED COMFORT SINCE 1886

Operation Oil Heat Associates enters second Phase of Program

A SIX-MONTH PROGRAM to complete the second phase of the development of a new oilburner has been announced by Operation Oil Heat Associates.

During its initial phase the organization has conducted a study designed to develop a radically new oilburner. The second stage now will concentrate on building a commercial form based on the results of the study.

In time the organization will make developments available to the industry on a non-exclusive basis, licensing interested firms for the manufacturing and marketing of their developments. Basic research for the project is done by Jet-Heet, Inc.

William Kenny, president of Meenan Oil Co., is chairman of OOHA's executive committee. Also in the original group of organizers are Buckley & Scott, Boston; Valley Oil Co., Middletown, Conn.; Parfield Oils, Ottawa; Jet-Heet, Inc., Englewood, N. J.

Recently the following were added as new members or contributors to the program: Hess, Inc., Perth Amboy, N. J.; Liquifuels, Ltd., Toronto; Geo. W. Pickering Co., Salem, Mass.; Robert Fawcett & Son Co., Cambridge, Mass.; Alvin Hollis & Co., South Weymouth, Mass.; Bursaw Oil Corp., Salem, Mass.; Universal Terminals, Ltd., Cornwall, Ontario and Toronto Chapter of OHA of Canada.

Also, Coastal Oil Co., Newark, N. J.; Mid-Hudson Oil Co., Poughkeepsie, N. Y.; T. R. Loizeaux & Co., Plainfield, N. J.; New England Petroleum Corp., New York, N. Y.; Troy Oil Co., Indianapolis; Canadian Import Co., Montreal.

Stop
COSTLY
SERVICE
CALLS
with Honeycomb Filter Tubes
There's just one reason for you to install Honeycomb Filter Tubes — and Fulflo Filters. That reason is to save you money by eliminating costly service calls due to oil impurities.
Honeycomb Filter Tubes were developed specifically for fuel oil filtration. They're now better than ever because an improved film of fibres across hundreds of filtering tunnels removes micro-contaminants. They guard against clogged nozzles and fouled points.
Insist on Fulflo Filters and genuine Honeycomb Filter Tubes.
FULFLO FILTERS
COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS
PLANTS IN MELROSE, MASSACHUSETTS AND LEBANON, INDIANA

Oil Heat Old Timers hold Dance and Christmas Party

TWO ANNUAL AFFAIRS were conducted recently by Oil Heat Old Timers, Long Island City 1, N. Y.

The first was the annual fall dinner dance on November 28, with more than 100 people in attendance. The enjoyable evening was highlighted by gifts for all the ladies. A committee, headed by Jim Wargas, Petrometer, and club president, made the arrangements. Other members were Howard Klerk and Dick Lederer, Petro; Lenny Rathe, York-Shipley; Gus Triola, Heating Control Repair Service; Art Bierman, Petrometer.

About 75 members and guests gathered for OHOT's annual Christmas party on December 3, with the evening's activities enlivened by entertainment and the awarding of door prizes. Both affairs were held at the Boathouse, Astoria, N. Y.

Resek speaks at Meeting of Indiana Association

"FUELOIL DEALERS must recognize that more burner equipment must be sold if more heating oil is to be sold," J. V. Resek, Industrial Combustion, Inc., Monroe, Wis., told members of the Indiana Independent Petroleum Association at a recent meeting.

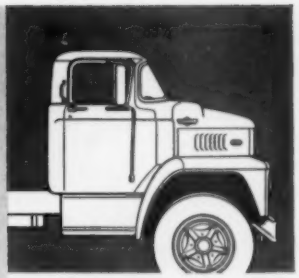
He urged major producers support new classifications of heating oils so that purchases may be made by referring only to name and number without further technical description.

There's an "economy story" in every compact inch of this 89¾"-BBC CAB-FORWARD by DODGE

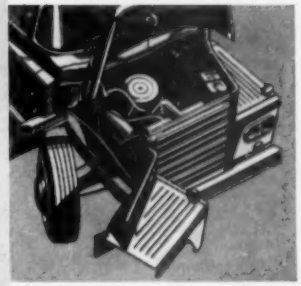
Truck owners, drivers and mechanics are talking about this money-saving new Dodge truck! For here's a unit compact enough to be easily maneuverable, yet it avoids the *extra-short* dimensions that put the cab smack on top of the engine. *It's a fixed cab, thereby sparing you the expense and problems of a cab you must "tilt" in order to reach the engine!*

How *do* you reach the engine? That's an "economy story" in itself! Just release a latch, and exclusive Dodge Servi-Swing fenders open out to let a man step in beside the engine, making it completely accessible for fast servicing that cuts labor costs.

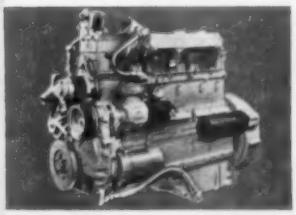
There's an "economy story", too, in new diesel and gasoline engines, new frames, transmissions, clutches. Indeed, there's an "economy story" in *every compact inch* of this new truck! And your Dodge dealer will be most pleased to tell you all about it. See him soon!



89¾-INCH bumper-to-back-of-cab dimension makes tractor-trailer length limits easy to meet . . . provides extra maneuverability with any body mounted. Driver rides safely behind (not atop!) the engine.



SERVI-SWING FENDERS make the engine easy to "get at" from either side of the truck. This exclusive Dodge feature allows oil, water and battery to be checked without even raising the hood . . . let alone raising the whole cab as in "tilt" design.



CUMMINS DIESEL ENGINES, in four sizes from 464 to 743 cu. in., are now available in Dodge high-tonnage Power Giants. New gasoline V-8's (361 and 413 cu. in.) also offered. Pick the power that's "Job-Rated" to meet your own requirements!

DEPEND ON DODGE TO SAVE YOU MONEY IN TRUCKS

A PRODUCT OF CHRYSLER CORPORATION

Fuel oil & oilheat

Philadelphia fueloil Trucks featuring "Little Bill" and oil heat's Message

C. J. MALEHORN, better known as "Jack" to all his friends and associates, is general manager of the Young Supply Co., Upper Darby, Pa., a near suburb of Philadelphia. Chairman of the Oil Heat Council in the Greater Philadelphia area.

Recently, when he purchased two new rigs for his growing fueloil business, he decided that they would make ideal mobile billboards for institutional advertising of oil heat.

The two new trucks feature gleaming white tanks and bright Cities Service green cabs. Most of the lettering of the advertising message is in the same green, with "Little Bill" in a dark uniform proudly holding an orange flame in his hand. Key words in the copy also reflect the same color.

The company name takes an inconspicuous place in this promotional piece.

"To me, this is a wonderful opportunity to sell oil heat," Malehorn says. "We feel strongly that whatever benefits the fueloil business in this area will automatically benefit Young Supply Company. That's one reason we haven't stressed our company name. It's not generosity on our part—it's enlightened self-interest. Until our industry convinces consumers that oil heats best, it doesn't make much difference what our company name is."

Malehorn has been selling this idea to all his fellow OHC members in the area. He suggests that copy and art be kept under the general supervision of the Council to insure uniformity.

Several local dealers concur.

"There are about 300 trucks operated by members of the Oil Heat Council in the Philadelphia area," he says. "What a terrific thing it will be if we can get only 10% of these trucks dressed up like this for a start, and then keep increasing the number each time a dealer adds a new truck to his fleet! We'll have a real herd of rolling 'Little Billboards' on the streets at all hours of the day, carrying the oil heat message to thousands of people!"

AUTOMATIC HEAT IS ~~OUR~~ YOUR BUSINESS • • •

• • • AND E.F.M. OFFERS YOU MANY ADVANTAGES

- Direct Dealer Franchise
- Complete Line—Oil—Anthracite—Gas Boilers and Furnaces—Cast Iron and Steel
- Cooperative Advertising Program
- Equipment Display Plan
- Competitive Prices
- Field Assistance
- Dealer Sales and Service Bulletins
- Installation and Service Training
- Consumer Acceptance
- Customer Preference Can Be Met With One Line

You'll find many profit advantages with E.F.M.'s full line—Write or Call Today—

e·f·m The Finest in AUTOMATIC HEAT

ELECTRIC FURNACE-MAN INC., EMMAUS, PA.

FURNACE BURNER UNITS—BOILER BURNER UNITS—CONVERSION BURNERS
OIL—ANTHRACITE—GAS

• A NEW ZONE CONTROL VALVE THAT DARES TO BE BEST •

Hydrozone® outlasts... out-performs other zone valves 12 to 1!

The weight alone tells you that this is a zone control valve that's designed to last a lifetime! Heavier, sturdier . . . Hydrozone® Motorized Valves provide rugged, consistent performance up to twelve times longer than other zone valves.

COMPACT, UNITIZED CONSTRUCTION — Slim enough to be installed within baseboard enclosures. **OPERATES IN ANY POSITION** —Impossible to install incorrectly. **SIMPLE MANUAL OPEN-CLOSE ADJUSTMENT**—In case of power failure, valve can be manually opened or closed. **RUGGED ANGLE VALVE DESIGN** — Withstands greater punishment than butterfly types. **TIGHT-CLOSING SILICONE VALVE SEAT** — Positive closure . . . eliminates leakage of heat when closed. **QUIET OPERATION**—Not a whisper of noise . . . suitable for installation in living areas . . . stays quiet forever. **LEAK-PROOF SEAL**

CONSTRUCTION—(Pat. Pending) Flexible resilient seal design adapts itself to shaft movement . . . prolongs performance indefinitely. **FLOW THROUGH VALVE IN EITHER DIRECTION** — Cannot be installed backwards. **DUST-PROOF HEAVY ALUMINUM MOTOR CASE** — Activating mechanism keeps clean . . . free from foreign matter. **SELF-ALIGNING, LIFTING STAINLESS STEEL VALVE STEM**—Reduces wear on sliding parts for greater durability. **LIFE-TIME LUBRICATION—IN-BUILT UNION CONNECTION SUPPLIED**—Creative Engineering Design makes the difference in Cash-Acme Hydrozone Motorized Valves.

Another quality product of
INDUSTRY'S WIDE, WIDE LINE

A. W. CASH VALVE MFG. CORP.
666 E. Wabash Ave.
Decatur, Illinois

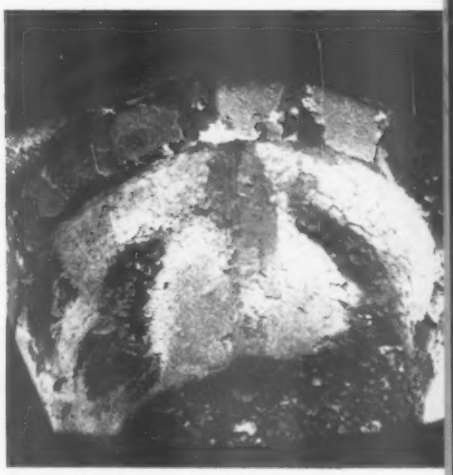
CASH AUTOMATIC VALVES ACME

fuel oil & oilheat

"One man installs this

Says
George Bernard, Chief Engineer,
Sid Harvey, Inc.,
Oil Burner Supply Specialists,
Valley Stream, New York

Here's how easy it is to install a new Cerafelt combustion chamber inside the present worn refractory chamber:



9:00—Esso Standard Oil serviceman sees chamber needs replacement.

9:30—Complete unit in place and Cerafelt sticker put on burner wall.

New Johns-Manville Cerafelt kits let you install a better firebox . . . at less cost!

JOHNS-MANVILLE
JM
PRODUCTS

Cerafelt combustion chamber *—in 30 minutes!"*

"J-M Cerafelt® installs faster and easier than brick with no cement, mess or clean-up. And this lightweight unit produces a better firebox, yet it costs us less to work with and lasts indefinitely.

"Working with a Cerafelt kit," continues Mr. Bernard, "one man can complete a combustion chamber installation in 30 minutes instead of the usual 5 hours. All he needs is a sharp knife, snips and screwdriver.

"Cerafelt fireboxes heat up in seconds, and cool off just as fast. They absorb burner noises and thus provide a quieter operating unit."

9:10—He measures and cuts stainless steel sleeve from roll supplied in kit.

9:20—Cerafelt bottom and liner are easily cut to fill sleeve.

9:25—Chamber is disassembled and put together inside burner.

With new Cerafelt combustion chamber kits, installation is fast, easy. The kit consists of Cerafelt refractory felt, stainless steel backing, screws and an instruction sheet.

Regardless of the shape of the old chamber, it's easy to completely assemble and install a new Cerafelt combustion chamber *in just 30 minutes!* And the new chamber will save the homeowner 20% in fuel bills by providing a hotter, cleaner flame that reduces smoke and soot.

Send the coupon today for further information on new J-M Cerafelt combustion chamber kits.

JOHNS-MANVILLE

Johns-Manville
Box 14, New York 16, New York
In Canada, Port Credit, Ontario

Name_____

Firm_____

Street_____

City_____ Zone____ State_____

Nu-Way to expand Production in United States and Europe

HEAVY OILBURNERS will be produced and marketed in the United States by Nu-Way Corp., Rock Island, Ill. The new line will use engineering techniques developed by Nu-Way Heating Plants, Ltd., Droitwich, England.

A new plant will be constructed in Europe as a joint undertaking by both firms to produce oilburners to be sold on the Continent to original equipment manufacturers and to jobber-dealers.

These plans were revealed at a conference held recently in Rock Island where J. E. Rettke, president, John W. Olson, vice-president, and R. E. Parmenter, secretary-treasurer, were hosts to Arthur Fowkes, export sales manager, and Jock Hamilton, chief development engineer for the British Nu-Way firm.

Studying an oilburner in the experimental lab of The Nu-Way Corp., Rock Island, Ill., are J. E. Rettke and John W. Olson looking over the shoulders of Jock Hamilton and Arthur Fowkes.

Cash-Acme zone control Valve ready after field and lab Tests

HYDROZONE motorized zone control valves have been released by A. W. Cash Valve Mfg. Corp., Decatur, Ill., after exhaustive field and laboratory tests.

In the photograph, G. William Madden (right) vice-president in charge of sales and R. S. Doherty, vice-president, inspect one of the zone control valves picked at random from the company's new production line set up to produce Hydrozone valves. New design concepts are said to make possible new standards in zone control valve performance.

It really rolls in for the Sinclair Oil Heat Distributor

Right now, the alert businessman who qualifies for a Sinclair Heating Oil franchise can build it into a real money-maker. Four major reasons support this fact:

- **You can offer premium quality products at regular prices. Sinclair Heating Oil contains an exclusive anti-rust ingredient. Result: reduced service calls.**
- **A strong advertising program—designed to be used at the local level—*where it counts most!***
- **A special sales training program—full of profitable new ideas.**
- **An assured product supply—thanks to Sinclair's huge production and ample storage facilities.**

There's much more in the market for you with Sinclair Heating Oil. For details, write: Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

Sinclair
HEATING OIL

Sinclair HEATING OIL SuperFlame

At his Chicago oil depot, Mr. C. E. Lund talks to Ben Kijek, driver of this Model AC Mack which was purchased in 1925 and is still in daily use. **Recorded downtime on this indestructible old timer has been only a relatively few days in its entire 34-year life!** Flanking famous old truck are two other members of Lunoil's Mack fleet—a B-61ST six-wheel tractor and a handsome N-42S cab-forward fuel oil truck.

Here's brand loyalty that has paid off for 42 years

Mack trucks were working for Chicago's H. N. Lund Coal Co. during the first World War . . . and some of the famous old Mack AC Models which the Lunds bought back in the "roaring twenties" are delivering coal to this day . . . doing a good job 34 years later. Amazing? Not if you know how Macks are made. Finest engineering; finest workmanship; finest materials. That's the secret of the dependability, efficiency and long life of a Mack truck.

Today the Lunoil Division of the H. N. Lund Coal Co. still relies on Mack trucks for dependable fuel oil handling. On the long hauls from refinery and bulk plant, the big Mack B-61ST's do the job; while the handsome, husky N-42S cab-forwards make retail fuel deliveries through heavy traffic from one end of Chicago to the other.

The sooner you put Macks to work in your own operation, the sooner you'll start to realize the tremendous profit potential of their bonus cargo capacity . . . their swift mobility in congested areas . . . their strength, stamina and dependability. Check your Mack branch or distributor for full details. He'll help you choose the Mack best suited to your requirements. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

7037

MACK
FIRST NAME FOR
TRUCKS

ALLEN

84-4 Duo-Control Booster Fan

Excellent for Supplying More Basement Heat with Warm Air Jobs

24-Volt motor, supplied from low-energy transformer (U.L. Approved), permits installation even in strict city code areas. No service problems—special bearings, with large high-temperature oil reservoirs, assure trouble-free performance. Ideal for extra-long duct runs. Package includes Booster Fan, Room Thermostat, and Transformer.

At your Jobber, or Write:

PARK HEATING SPECIALTIES

6212 Goodrich Avenue, Minneapolis 16, Minn.

In New England and New York: **Howard Nunnally Associates, 639 S. Warren St., Syracuse, N. Y.**

Sinclair Superflame Magazine covers oilheating Activities

SINCLAIR REFINING CO. has distributed the Fall 1959 number of *Sinclair Superflame*, first issue of a magazine

to be circulated among the oil company's personnel concerned with oilheating, as well as their fueloil distributors and sales personnel.

A statement outlining the purpose of the new publication points out that the magazine represents a "giant stride forward in establishing direct contact with the field sales organization. The magazine will provide the channel through which all people engaged in the marketing of Sinclair heating oils will be advised simultaneously of events, methods and procedures encouraging improved service, better promotion, ideal customer relations and consequently great profit."

One of the articles in the first issue explains oilheating industry countermeasures in heating oil's competition with natural gas.

Midland-Ross Corp. buys Surface Combustion Corp.

SURFACE Combustion Corp. with headquarters in Toledo and Columbus, O., has been acquired by Midland-Ross Corp. Janitrol heating and airconditioning units are made by Surface Combustion Corp.

Midland manufactures air and vacuum power brakes, air compressors, air controls and other products.

Mt. Hawley Manufacturing has Change in Ownership

W. A. HALE has acquired the Mt. Hawley Manufacturing Co., Peoria, Ill., from Bryant Mfg. Co., Indianapolis. He founded the firm in 1946 and has been associated with it ever since.

Weisner

The firm's sales division will be transferred to Peoria and R. E. Weisner has been appointed national sales manager. The company makes steam and hot water boilers.

Previously, the oilburner division of Mt. Hawley had been acquired by the Hart Heat Division, Avery Farm Machinery Co., also Peoria.

The present boiler lines will be continued and a new line of economically-priced boilers adaptable to small residential and housing projects will be added. No changes in personnel or policy are contemplated.

Make ONE Service Call — *Not TWO*

Reduce Inventory

THERMOLOK ADAPTO TRANSFORMER will fit 80% of the burners you service

115 V and 220 V

THERMOLOK Manufacturing Co., Inc.
1099 Tulip Ave., Franklin Square
Long Island, New York

ASK YOUR JOBBER Today

the all NEW DECO VAC POWER CLEANER

All-weather Cleaner on Trailer can be Pushed or Pulled by One Man into Tight Narrow Places.

DESIGNED and ENGINEERED for OIL BURNER SERVICEMEN

First Completely New Idea in Power Cleaners
100% as Fast and Efficient at Less Than ½ the Cost of Competitive Cleaners

ONE YEAR OF RUGGED FIELD TESTING PROVED THESE FACTS . . .

Less Operating Cost One man can do the work of two. Gas cost less than 25¢ per hour.

Low Maintenance No bags to constantly replace. No big motor to keep up. Heavy duty all welded construction.

Easier To Handle Just the right size for one man. Can be pushed or pulled into tight narrow places.

Reserve Power For large industrial jobs. All jobs, large or small, are a snap with your DECO-VAC.

Large Capacity Disposal box will hold over 750 lbs., (13½ cu. ft.) before emptying.

Easier Disposal Can be wheeled to disposal area. No lifting.

All-Weather Cleaner DECO-VAC performs efficiently in rain, sleet or snow.

Less Hook Up Time 25 ft. of suction hose attached permanently to suction fan. All hose 25 ft. lengths.

Greater Safety No danger of bag blow-out on job.

Can be mounted on any size truck. Detaches easily from trailer and bolts on truck. No special or costly mounting required. Equipment shown above mounted on Chevrolet El Camino.

Here's A Low Investment Cleaner That Will . . .

- Speed up your service.
- Advertise for you at all times.
- Keep your servicemen happy.
- Do a better cleaning job.

DECO MANUFACTURING CO.
903 Twenty-Second Street
Rockford, Illinois

"FLEET OPERATING COSTS HAVE BEEN CUT 20%

Francis J. Schuster, executive vice-president of Troy Fuel Oil, Inc., Indianapolis, Indiana, is as familiar with the trucks in his fleet as he is with every other phase of the successful fuel oil delivery operation established in 1930. Troy Fuel Oil Co. uses 23 Ford Trucks to deliver its products to customers within a 35-mile radius of their Indianapolis terminal.

"Our experience with Fords has proved that you can run a fleet of trucks more efficiently if you pick one make and ride it. We save on maintenance costs because our mechanics are fully familiar with Ford's design.

"And, with an all-Ford fleet we don't have to stock a large parts inventory to be able to handle all repairs. We can get those heavy items we don't stock delivered to our shop an hour after ordering.

"Detailed cost records kept during the first five years of our Ford standardization program show that these and other related savings reduced our fleet operating expenses more than 20%.

"The units we use range from pickups to tandem axle tractors and we find that Ford Trucks fit our requirements to a tee. The fact that Ford engines are made to run efficiently at a high rpm rate lets us select high numerical rear axle ratios which give us longer power train life. Since most of our engine load is in pumping, and we don't need more than 45 mph in city delivery, we can use a smaller engine and still get good acceleration.

"And Ford's Tilt Cab design gives us bigger payloads due to higher front axle loading. This is particularly true of our C-700 unit which carries 2,200 gallons of fuel oil for home deliveries."

SINCE WE STANDARDIZED ON FORD TRUCKS!"

Troy Fuel Oil Company's C-700 shown at the loading area is only 18½ feet long and is such an attention-getter that they have used it in their exhibit at the Indianapolis Home Show for the past three years.

Troy drivers like the maneuverability and easy ride they get with Ford's Tilt Cab Trucks. Turning tight corners and getting out of blind alleys is no chore with their Fords.

Big Fords for '60 are built for longer life... with Certified Durability

Whatever your job... wherever you do it... you'll discover just as Mr. Schuster did, that Ford Trucks are the best investment you can make for your transportation dollar.

Certified results of tests conducted by America's leading independent research organization (name available on request) confirm the fact that Ford Super Duties have been refined to make them more durable than ever before. Automatic radiator shutters, improved electric fuel pumps, and redesigned wiring harnesses are typical of the advancements to be found in these units.

Automatic radiator shutters reduced the coolant temperatures recorded in severe mountain road tests from a range of 79° to a 20° range. Engine operation between the temperatures of 167° and 187° means less expansion and contraction, more efficient combustion and better lubrication ... all of which contribute to longer engine life.

Dynamometer tests showed *no vapor lock* with Ford's submerged-type electric fuel pump at temperatures up to 200°. Incipient vapor lock with mechanical fuel pump resulted in a power loss of 9% under the same conditions. Shaker table tests plus constant exposure to oil, water and heat proved 1960 wiring harness to be *three times longer lived.*

Test results like these plus the experience of satisfied users are important, but that is not all. For 1960, the Super Duty line has been broadened to provide even more flexibility in power train options. Get the facts from your Ford Dealer!

FORD TRUCKS COST LESS

LESS TO OWN... LESS TO RUN...
BUILT TO LAST LONGER, TOO!

MAKE MORE
PROFIT ON
EVERY GALLON

DELIVER MORE
OIL WITH
LESS WORK

BY USING

SPEED-KLEEN

Nozzle tube and
fill pipe fittings.

Stop nursing problem fills! Speed-Kleen fittings make all fills easy fills—you deliver oil to whistle vented tanks at any speed you want—up to 100 g.p.m., or more—safely, cleanly, with less effort. Let us prove it and show how easily you may install this work saving, money making equipment without loss of time—simply put it on in place of the present fill cap.

Don't continue losing profits. Write or phone C. G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

Crescent Parts & Equipment Co., St. Louis, sponsored the meeting shown in the photograph. It was described as the largest dealer service meeting ever held by a service station in the Midwest. The group shown arranged and conducted a program on the Webster fuel unit and delayed-action valve. Left to right: Clarence Bartling, Crescent; Lou Ehrich, Webster; Cosmo and George Giudici, Crescent; J. Enghold, Webster.

PRINTED FORMS
AND OPERATION AIDS
For Immediate Shipment

Check items you are interested in. Attach to your letterhead, mail for information, prices, FREE SAMPLES:

☐ Degree Day Cards
☐ Service Order
☐ Service Ticket
☐ Service Record Card
☐ Daily Record of Deliveries
☐ Service Dept. Record
☐ Authorized Receipt
☐ Door Knob Notice Card *
☐ Telephone Call
☐ Inter-Office Correspondence
☐ EZE Stick Pressure Sensitive 'Label *
☐ Price Charts
☐ Weather Temp. Recording Thermometer
☐ Safety Sidewalk Caution Signs
☐ Sort-O-Matic Rack

☐ **METERED ONE-TIME CARBON DELIVERY TICKETS**
(Truck—Bulk Plant—Gas Pump)

My Name.....
Company.....
Street.....
City.....*State*.....

*Allow 2 weeks to imprint your copy.

Serving 20,000 Petroleum Firms Over 30 Yrs.
DEGREE DAY SYSTEMS
39-30F 58 ST. WOODSIDE 77, N. Y.

Bacharach gives OHI Library Film on instrument Testing

THE EDUCATION COMMITTEE of the Oil-Heat Institute of America has announced that a new film strip on instrument testing is now available.

Bacharach Industrial Instrument Co., Pittsburgh, Pa., prepared and produced the film which shows the step-by-step procedure employed in combustion testing an oilburner.

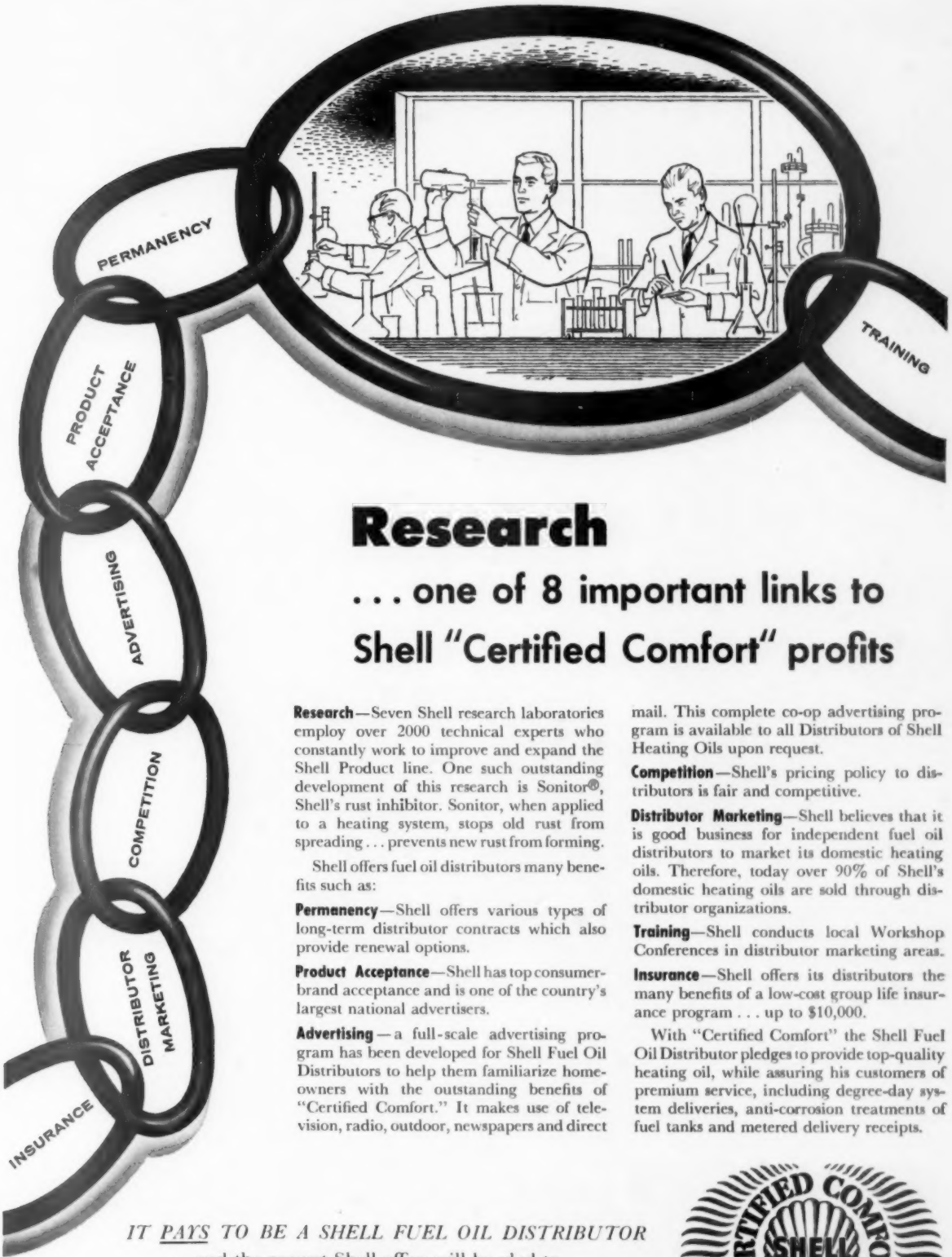
Dealer Advisory Council started by American Oil

AMERICAN OIL CO., New York, has organized a Dealer Advisory Council to help distributors achieve more profitable operations. The first company-wide meeting of the Council was held November 20 in New York City.

Attending were distributors (one from each of 25 sales districts), plus members of the company's sales staff. The distributor-representatives were winners in a recent sales contest.

The council will promote discussion of sales and advertising plans. Its broad objective is to improve these plans and programs and thereby help dealers operate more profitably.

Among the Amoco officials taking part in the initial meeting were T. A. Aldridge, vice-president in charge of marketing; C. H. Coughlin, general manager of sales; and G. M. Glazier, assistant general manager of sales.



Research

. . . one of 8 important links to Shell "Certified Comfort" profits

Research—Seven Shell research laboratories employ over 2000 technical experts who constantly work to improve and expand the Shell Product line. One such outstanding development of this research is Sonitor®, Shell's rust inhibitor. Sonitor, when applied to a heating system, stops old rust from spreading . . . prevents new rust from forming.

Shell offers fuel oil distributors many benefits such as:

Permanency—Shell offers various types of long-term distributor contracts which also provide renewal options.

Product Acceptance—Shell has top consumer-brand acceptance and is one of the country's largest national advertisers.

Advertising—a full-scale advertising program has been developed for Shell Fuel Oil Distributors to help them familiarize homeowners with the outstanding benefits of "Certified Comfort." It makes use of television, radio, outdoor, newspapers and direct mail. This complete co-op advertising program is available to all Distributors of Shell Heating Oils upon request.

Competition—Shell's pricing policy to distributors is fair and competitive.

Distributor Marketing—Shell believes that it is good business for independent fuel oil distributors to market its domestic heating oils. Therefore, today over 90% of Shell's domestic heating oils are sold through distributor organizations.

Training—Shell conducts local Workshop Conferences in distributor marketing areas.

Insurance—Shell offers its distributors the many benefits of a low-cost group life insurance program . . . up to $10,000.

With "Certified Comfort" the Shell Fuel Oil Distributor pledges to provide top-quality heating oil, while assuring his customers of premium service, including degree-day system deliveries, anti-corrosion treatments of fuel tanks and metered delivery receipts.

IT PAYS TO BE A SHELL FUEL OIL DISTRIBUTOR
—and the nearest Shell office will be glad to show you why. Ask for the District Manager.

CERTIFIED COMFORT
SHELL
HEATING OILS

for
all-star
sales performance
sell
LINCOLN
★ HIGHEST QUALITY
★ FULL FLEXIBILITY
★ HANDSOME PROFITS

LINCOLN Oil-Fired Cast Iron, Packaged, Automatic Boiler. Available from 111,000 to 180,000 Btuh gross I-B-R output.

Here's a star in any dealer's show room. Advanced, honey-comb boiler design assures maximum heat transfer in minimum space. Equipped with extra-large copper-tube tankless water heater. All controls prewired and factory tested.

Write for full descriptive literature and get all the reasons why it pays to push the LINCOLN line!

LINCOLN
AIR-CONTROL
PRODUCTS, INC.
Manufacturers of Heating and Cooling Equipment
SWARTHMORE, PENNSYLVANIA

OHI Convention

(*Begins on page 79*)

These "package" tours will include train or plane fare, hotel and complete Convention registration. A special announcement with details of the tours will be mailed out soon.

First draft of the Convention program lists these sessions:

SUNDAY, APRIL 3
2:00-6:00 p.m.—General Committee Meetings including the Show Committee, Convention Committee, Distribution Division Events Committee, and Divisional Board Meetings.

MONDAY, APRIL 4
9:00-3:00 p.m.—Retiring Divisional Board Meetings
Annual Division Meetings
Retiring OHI Board Meeting
OHI Annual Meeting
New OHI Board of Directors Meeting (First Session)
New OHI Executive Committee Luncheon
New Distribution Division Board Meeting
Domestic Section Manufacturer Division Meeting
C-I Section Manufacturer Division Meeting
10:00-12:00 Noon—C-I Associates Meeting

TUESDAY, APRIL 5
9:30-12:00 Noon—Technical Division Symposium—Grand Ballroom
10:00-12:00 Noon—C-I Associates Meeting
12:15-3:00 p.m.—New OHI Board of Directors Meeting (Second Session—Luncheon)
6:00-10:00 p.m.—"Old Timers" "Hall of Flame" dinner—Grand Ballroom, Henry Hudson Hotel

WEDNESDAY, APRIL 6
9:00-11:45 a.m.—First Distribution Division Dealer Sales Building Business Rally—Grand Ballroom
10:00-12:00 Noon—C-I Associates Meeting
1:00-3:00 p.m.—Grand Diamond Jubilee Convention Luncheon—Grand Ballroom

THURSDAY, APRIL 7
9:00-12:15 p.m.—Second Distribution Division Dealer Sales Building Business Rally—Grand Ballroom
10:00-12:00 Noon—C-I Associates Meeting
1:00-8:00 p.m.—Chapter Secretaries Annual Meeting and Seminar

The 38th annual convention is to take place at the Park Sheraton Hotel, New York, and the concurrent 23d National Oil Heat and Air Conditioning Exposition will be held at the Coliseum.

Chairman of the Exposition Com-

Only with this VIKING "288" PUMP

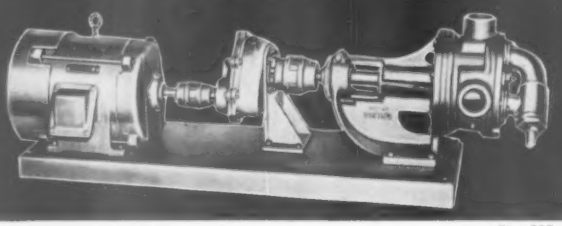


Fig. 288

...do you have such

POSITIVE — When we say "POSITIVE", we mean pumps that are completely self-priming and capable of stripping tanks dry.

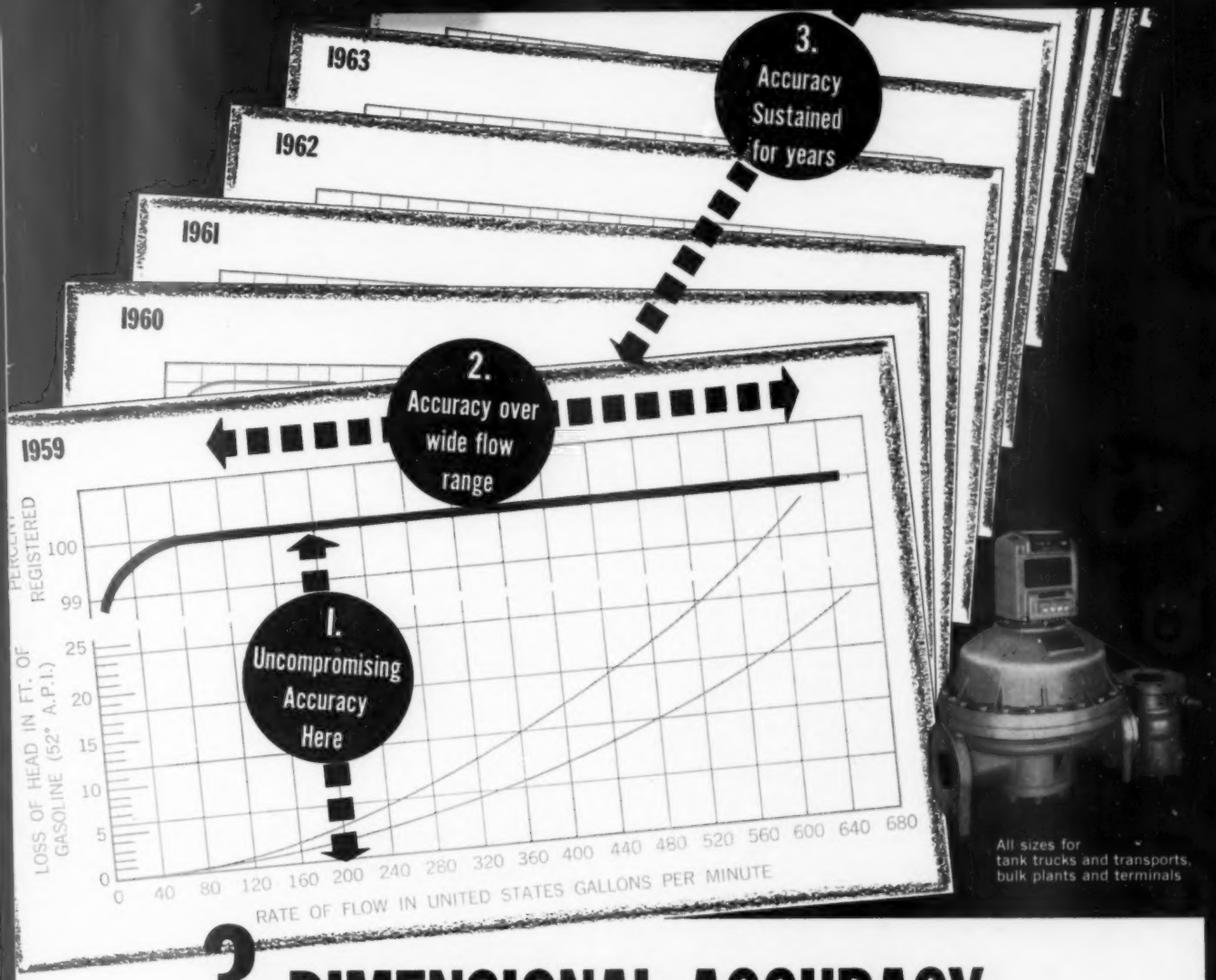
SMOOTH — By "SMOOTH" we mean pumping without pulsation and irregular flow that can cause damage to valves, fittings, meters, etc.

QUIET OPERATION — And to top it off, these "288" Viking Pumps with completely enclosed helical gear reducers are the last word in "QUIET" operation.

17 to 164 G.P.M. SIZES

For More Information, Send Today for Catalog CEE, page 27-28

VIKING PUMP COMPANY
Cedar Falls, Iowa, U.S.A. In Canada, It's "ROTO-KING" Pumps
Offices and Distributors in Principal Cities • See Your Classified Telephone Directory



All sizes for tank trucks and transports, bulk plants and terminals

3-DIMENSIONAL ACCURACY

The only important concept in metering

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mittee is R. S. Doherty, A. W. Cash Valve Mfg. Co., Decatur, Ill. Ralph Becker, managing director, Oil-Heat Institute of America, Inc., 500—5th Ave., New York 36, N. Y., is handling the details of signing space contracts and allocating exhibit areas to equipment and allied manufacturers.

❖

James J. Grambley will represent C. A. Olsen Manufacturing Co., Elyria, O., in the states of Ohio, Eastern Kentucky, West Virginia and Western Pennsylvania. *John J. Millner* will represent the company in Eastern Tennessee, Virginia, North and South Carolina.

Paul D. Williams has been named manager of Marketing Administration, Communication Products Department, General Electric, Lynchburg, Va. He will be responsible for commercial service, order processing, sales forecasting and marketing budgeting for two-way radio, microwave, carrier current and military communication lines.

Letter to the Editor

(Begins on page 52)

4. Accelerate and expand the research program to develop a simplified, lower-priced burner that would not only burn oil more efficiently, but reduce required burner service. Any such new burner should burn oil in a "B" type flue.
5. Accelerate the consolidation of all associations into one large national association, effecting at an early date a well-planned, concerted, coordinated program for the entire heating oil industry.
6. Upgrade the service available on oilburners by such new national association conducting annual regional burner service schools for elementary and advanced courses in the installation and service of oilfired equipment.
7. Preserve present commercial and institutional gallonage and secure a reasonable share of such new construction by such new national association employing in each marketing area a well-trained, competent combustion engineer whose services would be available to all dealers and distributors of heating oil in such area.
8. Conduct at the local level through the cooperative support of suppliers and dealers a strong merchandising program promoting year-round oilburner service contracts. Twelve month service contracts avoid repeated service bills and assure care-free heat; maintain customer contacts; provide data on condition of customer's heating plant; give oil dealer a jump on gas company when customer's equipment requires replacement.
9. Conduct at the local level through the cooperative support of suppliers and dealers a strong merchandising program promoting budget payment plans. Budget payment plans eliminate monthly oil bills; avoid customer reaction to oil price changes during the heating season; prevent the customer from receiving large bills

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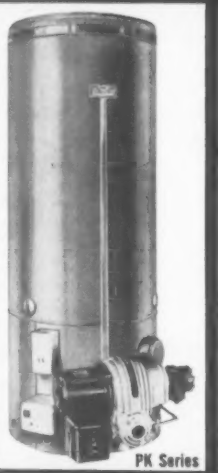
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Cannot lose shape or fall in. INSTANT-GLO's thick insulating brick wall gives maximum sound absorption. It's rugged . . . outlasts combustion chambers of inferior materials.

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Would you pay $95 a year rental or a modest purchase price *to save up to 30% on "your bookkeeping and trucking costs?* That's what hundreds of users of the HIDY degree-day system are saving every year. With this system you can deliver more gallons per mile—make fewer trucks do the same job. Can be bought or leased. In use in all parts of the country. The most accurate, easiest to install, simplest to maintain degree-day recorder on the market—and that statement is backed by $1000 reward for anyone who can prove otherwise! Write for full story of this money-saving, work-saving plan —ask for Bulletin I-PF. Please state whether you already operate on Degree Day system.

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Branch Office:
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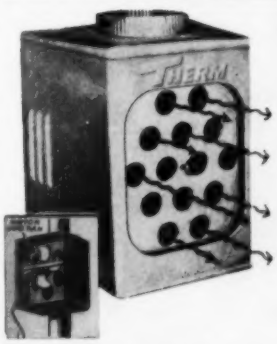

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10. Conduct at the national level a strong advertising program that would acquaint the present and prospective homeowners with the many advantages of burning the new improved heating oil in the new efficient oilfired equipment.

Such a program should win the united support of all the industry. It would rebuild morale; restore confidence; rekindle enthusiasm of the retail segment in the future.

LOUIS A. LANGIE, *President*

Albert V. Fraser has been named assistant general manager of marketing in the general sales department at Chicago of Standard Oil Co. (Ind.). He started with the company in 1930 and in 1953 became regional manager for the eastern region.

Stanley B. Graft has been appointed export manager, International Division, General Controls Co., Glendale, Calif. He was formerly export manager for Iron Fireman Manufacturing Co.

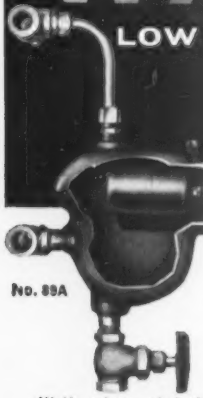
Floyd C. Weaver has been made supervisor, Motor Sales Division, Emerson Electric Mfg. Co., St. Louis, Mo. He was formerly district sales manager in the company's Chicago office and has an extensive background of 25 years' experience in motor application and customer service.

A. L. Sachs has joined A. Y. McDonald Mfg. Co., Dubuque, Ia., as chief product engineer and quality control director. He will be concerned with the expansion of product lines.

WATTS

LOW WATER CUT-OFFS

No. 89A features "foolproof" mercury switch plus . . .



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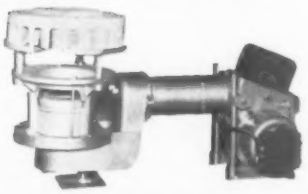

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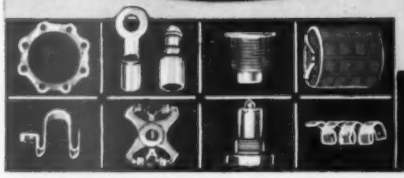

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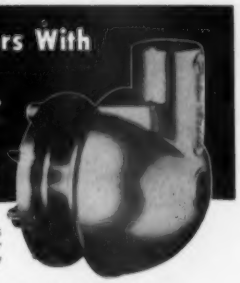

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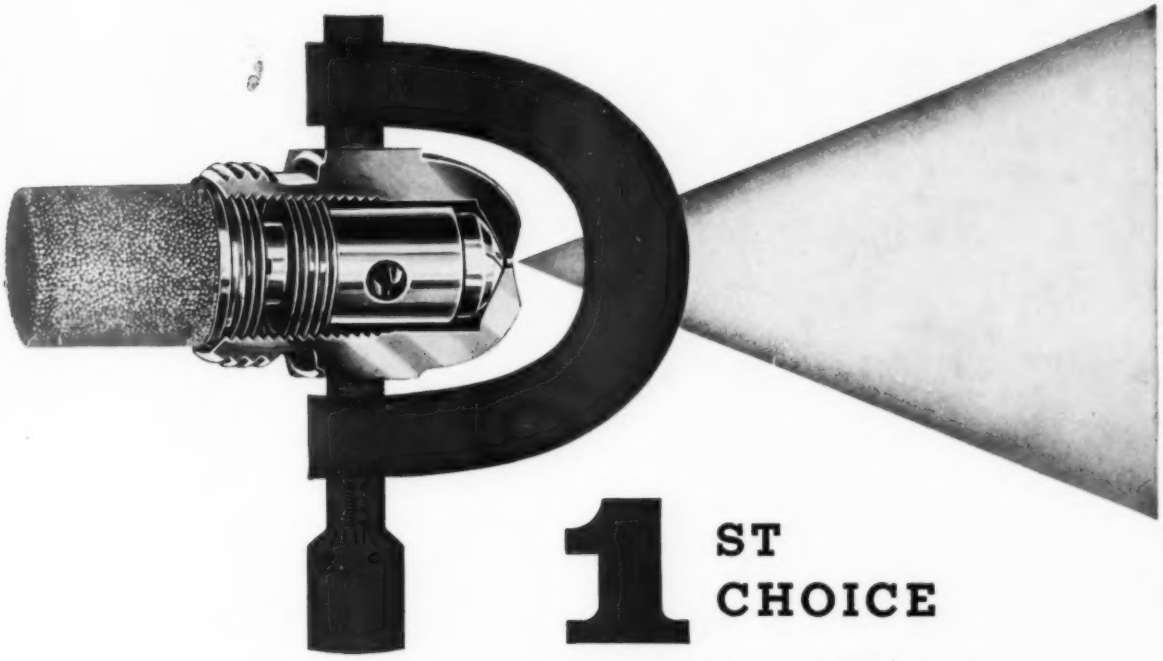

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OF THE INDUSTRY

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WHAT IS MONARCH PRECISION? Exclusive machines designed and manufactured by Monarch permit *regular* nozzle production to tolerances of 1/10,000 of an inch . . . certain critical dimensions within even closer limits! This, plus *individual* testing on *oil* is your assurance of perfect nozzle performance . . . *always.*

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EXTRA SATISFACTION! You have the double-satisfaction of a more profitable service operation, and customers with full confidence in *you!*

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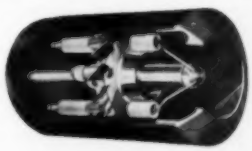


AIR MIXING EQUIPMENT

COMBUSTION HEADS:
G-81-C Head is as easy to install as an ordinary Air Cone and Stabilizer. Produces high CO_2 with no "adjustments" to get out of order. For 3⅞" or 4" I. D. Air Tubes.

CONVENTIONAL:
Bladed Cone Rings and four blade Stabilizers for ordinary Air Tube replacement from 3½" to 8" I. D. Also special "Anti-Pulsation" equipment.

Also available: Flame Mirrors, "24" and "48" Nozzle Boxes, Racks, Wrenches, etc.

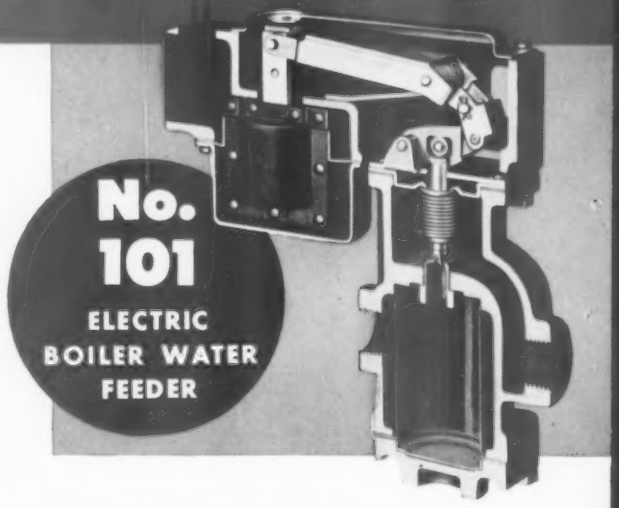
DEALERS: Buy from your Monarch Jobber. Write for Catalog "O"

REMEMBER: It costs more to clean a nozzle than to replace with a new, precision, guaranteed-uniform Monarch Nozzle.

GOING STRONGER THAN EVER!

More and more of these Electric Water Feeders are being added to McDonnell Low Water Cut-offs

Here's why:



When you add this No. 101 Electric Water Feeder to a McDonnell No. 67 or 69 Series or any other McDonnell "twin switch" Low Water Cut-off, you kill two birds with one stone:

1 You give owner something he needs and likes—the fully automatic boiler water level control of a combined water feeder and low water cut-off.

2 You end unnecessary shutdowns, and the headaches they cause . . . end them because the No. 101 is right there to keep the boiler going through periods when otherwise the cut-off might stop the burner.

The story is simple: Every McDonnell No. 67 or 69 Series Cut-off is provided with an extra "feeder" switch that is practically shouting for a No. 101. Many No. 101's have been hooked up to these "feeder" switches on oil fired jobs. But despite the fact that they are going stronger every year, the big oil fired market has scarcely been touched.

That is one big field, but it is only half the story. There are also a large number of gas fired boilers, equipped with No. 67 and 69 Series cut-offs. These Cut-offs have been crying in vain for the No. 101 . . . but now comes the good news:

New model with transformer now takes care of the gas boilers

A new and equally effective electric feeder—No. 101-24V—has been developed for gas boilers having low voltage control circuits. It has a special low voltage coil and comes complete with a companion 24V transformer. Regulations prevented wiring line voltage into a terminal box having a low voltage circuit, but the 101-24V completely overcomes this objection by making *both* circuits low voltage.

Note the simplicity of piping and wiring the No. 101. See it on display at your wholesaler's. Ask for latest bulletin.

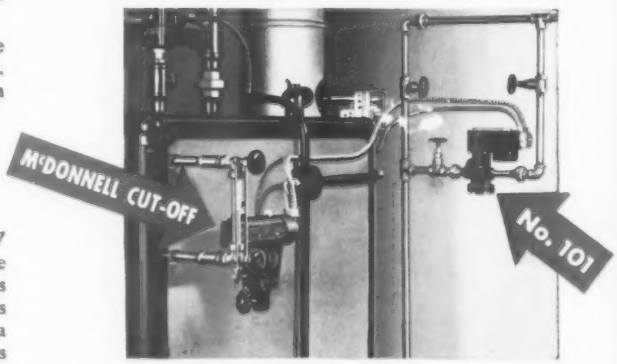
McDONNELL & MILLER, Inc.
3500 N. Spaulding Ave., Chicago 18, Ill.

Doing One Thing Well

Ordinary Solenoid Valves won't do

The No. 101 was specially designed to perform essential functions that cannot be properly handled by a conventional solenoid valve! The No. 101 valve is spring loaded to give it powerful drip-tight closure against any city pressure, and a compound leverage system assures positive valve opening by the solenoid. A button for manual feeding—exclusive feature—facilitates filling, makeup, and testing. It has the same time-tested valve mechanism and built-in strainer found in other McDonnell Feeders. Straight-through ½ inch inlet and outlet pipe connections simplify installation.

No. 101 and 101-24V are for boilers up to 5000 sq. ft. capacity; maximum steam pressure, 25 psi; maximum water supply pressure, 150 psi.



Makes the boiler water level as automatic as the firing

Nothing could be simpler: Simply insert the No. 101 in any horizontal section of cold water piping above or below water level. Wire it into the "feeder" terminals of any McDonnell "twin switch" Cut Off.

Ask Jobber Stocks

McDONNELL *Boiler Water Feeders*